



THALASSA - Renewal survey - 2025

Renewal survey



Genavir

1625 Route de Saint-Anne ZI de la Pointe du Diable
CS20071, 29280 Plouzané, France

Ship ID

Ship name	THALASSA
IMO	9070307
Ship type	Fishing Support Vessel
Flag	France

Class

Class society	Bureau Veritas
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Tonnage

GT	2803 t
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NB: Please send an e-mail to Antoine Samzun to receive a link to download the appendices.

ABOUT PROJECT

1 Introduction

1.1 Ifremer, Genavir and the French Oceanographic Fleet

Ifremer is a French marine science research institute, created in 1984. Ifremer is a state-owned public industrial and commercial institute (EPIC), placed under the joint direction of the French Research, Agriculture and Fishing, Equipment, Transport and Housing, and Environment ministries.

Ifremer is responsible for the French Oceanographic Fleet since 2018. The French Oceanographic Fleet comprises several surface vessels (4 deep-sea vessels, 2 mid-shore vessels and 5 coastal vessels), manned and autonomous underwater vehicles, and underwater systems (marine seismic equipment, coring systems...).

Genavir is a French shipping company created in 1976. Genavir's main missions are to manage oceanographic research vessels and equipment, maintain this fleet of vessel and collect technical data for scientific purposes.

1.2 Renewal of RV *Thalassa*

The RV *Thalassa* research vessel was built in 1996 in Dieppe (France). She is 74.5 metres long and can accommodate up to 25 scientists and 25 sailors. It is used for fisheries research, but can also carry out numerous multidisciplinary scientific campaigns in all areas of environmental science. Operations are mainly carried out in the Atlantic Ocean, the North Sea and the Mediterranean Sea, with occasional forays into the South Atlantic Ocean. The RV *Thalassa* is equipped with a full range of scientific equipment and large-scale fishing trawlers.

The RV *Thalassa* is due for renewal in the winter of 2025-2026. Just under 10 years after its mid-life refit, some of the ship's equipment needs replacing due to obsolescence. In addition to the statutory and common-sense inspections scheduled every 10 years, some parts of the ship are extremely corroded and require special attention to extend the ship's operating life to 2035 without major problems. The aim is therefore to carry out full maintenance on the vessel, but also to address this obsolescence problem in order to improve the vessel's reliability and meet the needs of scientists. We consider that these investments fall within the scope of maintaining the vessel in operational condition and are therefore not considered as modernisation, even if this is the case from time to time.

The main maintenance work is:

- Adapting the ship's existing circuits to accommodate the new HVAC equipment for the main air conditioning and the the provision plant.
- Maintenance works on safety equipment, cranes and manoeuvring equipment.
- Dry dock mechanical works: steering gear, propeller shaft, tunnel thruster...
- Overall maintenance of the vessel: piping, metal works, mechanical, electrical, painting...

The main maintenance work also includes work carried out by the Owner:

- Commissioning works on the hydraulic system of the vessel (performed with a third party subcontracted by the Owner).
- Work on the electric propulsion motor and power command control (performed with a third party subcontracted by the Owner).
- Commissioning of the new HVAC plants (performed by a third party subcontracted by the Owner).
- Work on the shaft line and steering gear (performed with a third party subcontracted by the Owner).
- Depending of shipyard technical propositions, Genavir reserves the right to use direct subcontractors in very specific cases.

2 Vessel description

IMO Number :	9070307
Date of Build :	03 may 1996
Ship Owner :	IFREMER
Ship Manager :	GENAVIR
Flag :	French 1st Register
BV Registered Number :	39N135

Class Notation :	I_Hull_Mach-Special service - Research vessel Unrestricted navigation Ice II, F, AUT-IMS, AUT-PORT, MON-SHAFT, ALM MACH Equipment: 1 Main anchor, chain diameter 40 mm, steel quality Q2 (High tensile strength steel)
Lenght Over All :	74,5 mtrs
Lenght between Perpendiculars :	64,94 Mtrs
Breadth Mld :	14,9 mtrs
Depth :	6,45 mtrs
Draught :	6,02 mtrs
Gross Tonnage :	2803
Net Tonnage :	840
Deadweight :	995 tons

In order to assist the yard for quotation, a virtual tour of the vessel is available on this link :

<https://ifremer.vis-on.fr/fr-fr/explore/watch?token=MzkvMTM1My9DaGn8UWCKjverrvCocBmxCEJWQ%3D%3D&pid=22>

3 Applicable regulations

3.1 General

The vessel is registered under the French flag ("1st register"), and complies with the requirements of all relevant French and international rules and regulations in force at the date of contract signature.

The design, building and outfitting of *Thalassa* are in accordance with French and international rules and regulations at the time of its building.

The Shipyard is responsible for complying with rules and regulations (for worldwide operations) in force at the date of contract signature as mentioned below.

The Shipyard shall prepare all documentation required by flag; the shipping company (Genavir) shall be in charge of submitting all relevant documentation to the French authorities. It is the Shipyard responsibility to deliver drawings and document cleared from any remarks or comments.

Such responsibility covers all documentation and calculations for vessel and equipment installed on-board except the OSE.

In particular:

- General Arrangement
- Fire and Safety Plan
- Load line report/ Load line certificate
- Weight estimation
- Power estimation (general and 24 Volts)

All works will be carried out following rules and regulations in force at the date of contract signature.

If some rules have been publicly announced but not in force at the date of contract signature but are due to be in force at vessel delivery, these rules shall be applied to the vessel. Items required by Class but not specifically mentioned in this specification shall be delivered by the Shipyard with no extra cost.

All works shall be performed as per the best industry standards and practices.

All documents required in these specifications must be submitted to the Owner.

3.2 Classification

The vessel is sailing under French Flag (1st Register) and is classed by BV with the following marks:

I HULL MACH Special service- Research vessel, Unrestricted navigation, Ice II, F, AUT-IMS,

AUT-PORT, MON-SHAFT, ALM, MACH

1 Main anchor, chain diameter 40 mm, steel quality Q2 (High tensile strength steel) The BV register number is 39N135

The vessel must be repaired by the shipyard in accordance with the latest Bureau Veritas rules and regulations for worldwide service. All structural modifications must comply with these rules.

The new pelagic winch is not classified however the design of the reinforcement and the integration of this equipment by the shipyard must comply with these rules.

3.3 Rules and regulations

The vessel is first category, and is classified as a special vessel with gross tonnage above 500 UMS and embarking less than 50 special staff members.

The vessel complies with the requirements of all relevant French and international rules and regulations in force at the date of contract signature, in particular:

All French regulations according regulations in force (divisions des Affaires Maritimes),

- International Regulations for Tonnage Measurements of 1969,
- International Convention on Load Lines 1966 with amendments,
- International Convention for the Safety of Life at Sea (SOLAS) consolidated edition 2001, and latest amendments,
- International Convention for Prevention of Pollution from Ships (MARPOL 73/78 Annex I, IV, V and VI) including amendments relevant for this type of ships,
- International Regulations for Preventing Collision at Sea (Colreg 90) with latest amendments,
- IMO Resolution A.534 (13) dated 17/11/1983 – safety rules for special service ship – and MSC 739 circular which amend that resolution,
- International Maritime Dangerous Goods (IMDG) code, 2006 edition,
- International Ship and Port Security (ISPS) code, 2003 edition,
- International Safety Management (ISM) code, 2002 edition,
- Life Saving Appliance (LSA) code, 2003 edition,
- Fire Safety Systems (FSS) code, 2001 edition,
- Panama and Suez Canal Regulations for both tonnage and navigation,
- USCG rules for foreign vessels operating in the navigable waters of the United States, Part 155 and Part 159,
- Regulation for ballast water treatment (IMO regulation BWM),
- Unmanned engine room,
- Reduced bridge watch during daytime.

3.4 Certificates

Certificates issued by French authorities:

- Certificate of navigation (Permis de navigation),
- Cargo Ship Safety Certificate,
- Special purpose Ship Safety Certificate
- International Oil Pollution Prevention Certificat
- International Air Pollution Prevention Certificate,
- International Energy Efficiency Certificate,
- International Sewage Pollution Prevention Certificate,
- International Tonnage Certificate,
- International Ballast Water Management Certificate,
- International Ship Security Certificate
- Polar Code Safety Cargo Ship Certificate
- Maritime Labour Certificate
- Safety Management Certificate
- DCS Certificate
- ILO 152 Cargo Gear Certification of davits,
- Lifesaving Equipment Certificate,
- Shore Base Maintenance and Radio Certificates
- Other necessary documents as required by the French Authorities

Certificates issued by Bureau Veritas:

- Certificate of classification,
- International Load Line Certificate,
- Cargo Gear Register,
- International Anti-fooling System Certificate,
- Other necessary documents as required by the class.

General arrangement, security plan, tank plan and all relevant drawings and documents requested by French authorities shall be updated and supplied in French. When required, they shall be printed, framed and arranged at requested locations in the vessel by the Shipyard.

The Shipyard shall update all drawings affected by Shipyard works. All drawing updated will comply with the actual numbering and tagging system of the vessel. If new drawings have to be issued by the Shipyard, they should comply with the actual numbering and tagging system of the vessel.

3.5 MED Certificate

All equipment and material supplied by the Shipyard shall be provided with a MED certificate where applicable.

4 Responsibilities and general organization

4.1 Responsibilities of the parties

The Shipyard shall be in charge of:

- Engineering. Preliminary studies have been conducted by Genavir. The results of these preliminary studies will be provided to the Shipyard. The Shipyard will be in charge of all detailed integration studies and manufacturing studies (for example: final design of spare deck D, pelagic winch integration, HVAC skids integration...).
- Safety. For all works, Genavir will propose a prevention and safety plan, which will have to be validated and follow-up by all parties (Shipyard, Genavir) and their sub-contractors.
- Insurance. For insurance aspects, refer to CCAP Article 10.2.

The Shipyard will be responsible for the planning, coordination and execution of the work and trials.

- A detailed schedule including Genavir supplies must be provided by the Shipyard and validated by the Owner's representative. This schedule shall also include the work of third parties subcontracted by Genavir.
- The Shipyard is responsible of the coordination of the works, in cooperation with Genavir for the works carried out by a third party subcontracted directly by Ifremer/Genavir.
- The Shipyard is responsible for the supervision of the works as detailed in the specification.
- The sea trials will be carried out according to a schedule proposed by the Shipyard and validated by the Owner's representative. The tests will be carried out under the responsibility of Genavir. During these sea trials, the vessel will be operated by a Genavir crew.
- The Shipyard will be responsible of the dry-docking of the vessel, including block arrangement.
- The Shipyard will supply the equipment, consumables, energy and workforce to achieve the work as described in this document.
- Each equipment or item listed in this specification shall be delivered by the Shipyard, unless it is clearly mentioned as "Owner supply" or "provided by the Owner" or "OSE". For the equipment provided by the Shipyard, the Shipyard will inform the Owner of the delivery planning of this equipment.
- For OSE (Owner supplied equipment), the Shipyard will inform the Owner of delivery deadlines in order to meet the schedule.
- The Shipyard shall provide all necessary tools and portable equipment to perform the works described in the specification.
- If some specific tools available on-board are required, the Shipyard shall check it proper working condition and use it under its own responsibility.
- The Shipyard will provide appropriate storage of the equipment provided by the Owner and storage of all relevant equipment removed from the ship.

The Shipyard is responsible for:

- The creation or update of documentation files, plans and interface drawings impacted by the work for which the Shipyard is responsible, and their supply in their native and PDF format.
- The provision of all documents, their updating and approval, as requested by the Class, to obtain class certificates, insofar as they relate to the scope of work for which the shipyard is responsible.
- The creation or update of all the documents required by Bureau Veritas to obtain certification. The Shipyard will transmit directly these documents to Bureau Veritas. Ifremer/Genavir will be informed of all exchanging with Bureau Veritas (via the Bureau Veritas VPM document sharing site, including a follow up by Genavir and Ifremer).
- All documents, drawings, remarks and comments relating to the class will be processed using the Bureau Veritas VPM web application. Insofar as they relate to the scope of work for which the shipyard is responsible, any additional costs will be borne directly by the shipyard, in compliance with all class-specific requirements for the work performed, including non-destructive testing, worker and material certificates, if required.
- Onsite class surveyor and Vessel's certificate renewal will be handle directly by Genavir.
- Update of the as-built drawings will be supplied by the Shipyard.

Included work:

It is the responsibility of the Shipyard during the tender process to ascertain that all items of the specification are clearly understood, and all associated costs are included in the offer. The proper review of the scope shall be achieved during the visit on-board, by official request as per the tender process and using the virtual presentation of the vessel available online.

All quoted works shall include:

- Access works, such as scaffolding, openings, dismantling, electrical connection / disconnection, protection of surrounding area and equipment, handling, crange and transport.
- Assistance from specialized contractor if required.

- Paint preparation and painting after works as necessary.
- Opening / closing of manholes and panels as necessary.
- Testing of all dismantled equipment and piping after completion.
- Non-destructive testing (NDT) as per class and good practice requirement.
- Equipment and supplies necessary to perform the works such as welding machine, air compressors, gas torch. Energy, water and gas supply for this equipment shall be also included.
- Consumables and supplies such as grease, gaskets, bolts.
- Cleaning after works, including the bilges when applicable.
- Scrapping of the removed equipment and steels upon Owner's decision.
- If any equipment or furniture is disassembled, if any piping network, wiring... is modified by the Shipyard to perform its works, the same shall be reinstalled on-board as it was or with duly approved modifications if necessary.
- In case of damage due to the Shipyard on items or spaces not covered by this specification, the Shipyard shall be responsible for repairing or rebuilding the place or the equipment damaged.

Warranty

The Shipyard will provide a 12-month warranty on the equipment supplied and on the work performed, refer to CCAP Article 10.1.

The Owner's representative shall validate items of equipment bought by the Shipyard, drawings, works and deliverables. Despite of this validation, the Shipyard shall assume the responsibility of the efficiency and the form-fit-function of solution proposed to this specification.

No additional work will be undertaken by the Shipyard unless requested by the Owner's representative in writing.

4.2 Shipyard organization

Shipyard shall describe the general organization implemented for the project, including but not limited to:

- Project organization chart,
- Technical organization chart, presentation of engineering capacities, engineering processes,
- Production organization chart, presentation of production capacities, production processes,
- Process of risks management,
- Process of delays management.

4.3 Shipyard facilities

The Shipyard shall describe in its offer the yard facilities including dry docks or floating docks capacities, lifting and handling capacity in the vicinity of the vessel, available workshops (painting, mechanics, machining equipment), distance of the workshops from the dry dock...

The Shipyard should also include a brief report on typical local weather for the scheduled docking period, or long-range weather forecast if available, in order that the Owner can assess the impact upon planned hull blasting/painting and other works.

4.4 Safety and security matters

The Shipyard will be responsible for the safety of the work, in coordination with the ship manager Genavir, and in accordance with the safety and prevention plan drawn up prior to the vessel's arrival.

It is understood that the ship manager has a good knowledge of the vessel and existing risk and the Shipyard is experienced in repair works safety management. Based on this facts, a close cooperation between both parties shall be achieved to maintain the higher safety standard during the work.

The Shipyard shall appoint a safety coordinator during the entire works period. The safety coordinator shall be available whenever some works are in progress on-board.

At the vessel arrival at yard, an introduction meeting shall be held between the parties to agree on the forms and procedures to be applied (hot works, confined space, electrical disconnection...). The delivery of work permits and gas-free certificates shall be included in the offer on a lump sum base. All permits shall be validated by Genavir.

The meeting should clearly define (but is not be limited to) the following areas of change (Management of Change) for the docking period:

- Limits of responsibility of the Owner, the Shipyard and Contractors.
- Possible change of procedures from Genavir to Shipyard for issuing work permits for tank entry and hot work.
- Possible change of procedures from Genavir to Shipyard for issuing electrical isolation permits.
- These changes and yard recording / reporting of same to be clearly defined and understood by all parties.
- Reiteration of hot work policies and fuel / liquid transfer policies.
- Emergency contacts and muster points established.
- Shipyard emergency response procedures established and shore fire line connected and proven.

All non-essential electrical services are to be isolated and tagged out by ships staff on arrival at the Shipyard.

Any equipment that needs to be operated during the period is then to be proven safe and cleared as required. This includes in particular cranes, davits, tuggers, main winches, steering gear, all propulsion equipment and navigation equipment.

A dedicated safety desk shall be provided by the Shipyard in the vicinity of the vessel. The following information shall be permanently available at this place:

- Vessel's GA, Safety plan and capacity plan
- An English copy of all works permits opened
- Tanks condition and gas-free certificates
- Contact details for all party involved and emergency response teams

During the entire docking period, daily security meetings shall be held regarding work progress and safety matters. It shall be attended by Shipyard and contractors' representatives, Owner's representative and vessel's officers. Minutes of the meeting will be in charge of the Shipyard.

The Shipyard shall provide all necessary equipment for fire and safety prevention such as extinguishers, fire lines, blankets, fans and watchmen, and it shall be included in the offer. If any ship's safety equipment is used during the repair period, it shall be refurbished at the Shipyard's expenses before vessel departure.

Watermist and other fixed extinguishing system will be disconnected during the entire work period

4.5 Quality Assurance - Quality Control

The Shipyard shall have a documented and implemented Quality Assurance System to ensure effective administration of all activities influencing the performance under the contract, i.e. all aspects, phases, parties and interfaces related to Shipyard' scope of work based on:

- Contract management plan,
- Quality assurance plan,
- Quality control plan.

A defined person or unit within the Shipyard's organization shall be responsible for monitoring the effectiveness of the system and its compliance to the Quality Assurance requirements.

The Shipyard shall be able to document, through inspection, certificates and tests that the required quality of all systems and equipment is achieved. The system shall include the main subcontractors' quality plan in order to implement the Shipyard's quality plan.

The Quality Assurance plan shall be presented to the Owner for review together with the contract management plan. The Owner shall be informed of any changes in Shipyard's Quality Management System during the contract period.

The Shipyard shall prepare a "Quality Control Plan" which shall be in accordance with ISO-9004 "Quality Management and Quality System Elements – Guidelines".

It shall be presented to the Owner for review within 1 month after signature of the contract.

Based on the "Quality Control Plan", the Shipyard shall invite the Owner's representative to carry out inspections and witness tests.

The Shipyard shall undertake quality audits internally and of subcontractors with sufficient frequency to confirm conformance with purchase order / contract, rules & regulations, planned arrangements and quality system.

Regarding noise and vibration, the Shipyard can be assisted by an expert in this matter.

All materials and articles of equipment installed in or delivered with the vessel shall be new, unless specifically stated otherwise. Equipment shall be standardized to keep spares to a minimum.

4.6 Approval of drawings and documents

In addition to the new drawings needed for the maintenance and upgrade works completion, the Shipyard shall be in charge of updating the existing drawings when impacted by the works for which the Shipyard is responsible. New drawings shall be provided in ".dwg" and ".iges" format.

All drawings and documents (updated or newly provided ones concerning all modifications or new areas) shall be transmitted to the Owner for approval as described in the CCAP. The final list of drawings to update will be validated by the parties. This list includes all drawings affected by the work and shall include the following as a minimum:

- [1] General arrangement plan
- [2] Safety and emergency evacuation plan
- [3] Working deck arrangement
- [4] Docking plan
- [5] Accommodation plan/furnishing and outfit plans
- [6] Engine room
- [7] Fishing laboratory arrangement
- [8] Hydraulic Room arrangement
- [9] Cabling and cable trays drawings
- [10] PIDs
- [11] Air conditioning systems in accommodation and scientific spaces
- [12] Air duct arrangement
- [13] Insulation plan
- [14] Stability booklet

- [15] Draft mark
- [16] Main and emergency switchboard and distribution boards
- [17] Navigation alarms systems
- [18] Electrical one-line diagrams
- [19] Main cables trays
- [20] Cable runs, trays and penetrations for mobile equipment cables
- [21] Lifting appliance register
- [22] Fire-fighting and fire-detection plans
- [23] Bilges and ballast plans
- [24] Vessel structural drawings

Technical specifications of the major auxiliaries and equipment units shall be submitted to the Owner for approval. Documents and drawing language shall be French or English.

All new drawings will be numbered according to the current numbering system of existing drawings.

4.7 Progress meeting and reporting

Engineering period

During Engineering period, at least one meetings shall be held between the Shipyard and the Owner. These meetings shall cover as a minimum:

- Engineering progress and main milestones,
- Drawings
- Status of the modifications and options requested by the Owner
- Status of main deliveries (Owner and Shipyard)
- Financial point.
- Minutes of the meeting will be in charge of the Shipyard.

Work period

During the work period, daily meetings shall be held between the Shipyard and the Owner. A weekly report shall include:

- Status of actions list agreed during the previous weekly meeting
- Works progress on a schedule
- The key orders placed (suppliers and subcontractors)
- Drawing approval status
- Equipment and sub-assemblies commissioning
- Sub-contractors activity (electricians, painters, outfitters,...)
- Status about the modifications and options requested by the Owner
- The coming months forecasts and main milestones
- Financial point

The weekly report shall be reviewed during the next weekly meeting.

During the work period, daily work coordination meetings shall be held between the Shipyard and the Owner.

4.8 Documents to be provided at delivery

The following documents shall be supplied (in French or in English) by the Shipyard before delivery of the vessel:

- 2 sets of drawing "As Built" printed and digital drawing files (.pdf, .dwg and .iges),
- Complete list of drawings and documents modified or produced by the Shipyard or its sub-contractors,
- For newly installed or supplied equipment and for modified equipment, 3 copies of instruction, operators and maintenance manual, with spare parts list and references (1 set shall be delivered before the dry-dock)
- A booklet giving an inventory of principal equipment specifications, data number, maker's name, maker's addresses, technical specification and trial reports references (list to be mutually agreed),
- For all equipment provided by the Shipyard, agreement certificates in accordance with regulations,
- Asbestos free certificate for equipment, materials provided by the Shipyard,
- MED certificates for equipment and material provided as applicable,
- Fire class certificates (e.g. M1) for all materials,
- 2 hard copies and electronic copies of all manuals
- 1 electronic copy of HAT and SAT reports for all equipment or system newly installed or modified,
- 1 electronic copy of all control reports.

4.9 Owner's Supplied Equipment

All items and equipment purchased and supplied by the Owner or its representative are called OSE "Owner Supplied Equipment". Spare parts supplied by the Owner for maintenance works are considered as OSE.

This equipment shall be delivered by the Owner (either the ship Owner Ifremer or the shipping company Genavir). They shall be incorporated in the vessel by Shipyard upon supplier's recommendations. Shipyard shall be in charge and responsible for the full incorporation of equipment and all functional trials as required for acceptance.

The Shipyard shall provide the following:

- required framings and mechanical interfaces, as well as resilient mounting,
- required power and hydraulic supplies,
- required cable trays and tubing, if necessary, for laying down each cable individually,
- required penetrations through decks and bulkheads and related cable glands,
- all cables (except expressly excluded) to be fitted within and between rooms, including laying them down and marking them,
- all terminal boxes and electrical devices related to cabling, or those supplied with any equipment, and install them,
- all supports, antennas and other outside components, and install them,
- required positioning checks,
- integration of components in consoles, racks, benches, ...
- cabling and final connection of equipment according to Owner's supplied diagrams,
- checks of all interfaces,
- assistance for commissioning of equipment, with his employees' support during the functional trials.

The Owner shall:

- Provide the Shipyard with technical information according to Builder's schedule for OSE,
- Provide all required accessories mounting,
- Provide assistance, if required by the Shipyard, from the maker/supplier of the system.

OSE are listed below:

- Double pelagic winch
- HVAC general air conditioning skid
- HVAC provision plant skid
- HVAC provision plant evaporators
- Caterpillar spareparts for 3512 TOP END visit
- A-Frames spherical plain bearings, bushings and cylinders parts
- Shaft line seals
- Steering gear spare parts
- Hydraulic motors
- Safety motor-driven fire pump
- KSB 80m3/h SEA WATER PUMP
- 8000 meters electro cable for CTD winch
- HEILA crane cables (textile and steel)

The list above is non-exhaustive. Detailed descriptions of OSE are included in specifications.

The Shipyard shall insure and install OSE, supply necessary storage place and crane assistance for Owner's deliveries. See Appendix for a preliminary list of all the equipment (unloaded or supplied by the Owner) that has to be stored in the Shipyard facilities, with details about dimensions and storage conditions.

4.11 Cleaning

The vessel shall be kept clean throughout the works. A complete cleaning shall be performed in all areas of works or impacted by works and passage before redelivery of vessel including capacities, engines and technical rooms bilges, external areas and accommodation.

The general cleaning of the vessel after works completion shall be included in the offer.

4.12 Spare parts

For the equipment delivered by the Shipyard, recommended spare parts shall be provided as specified in CCTP.

5 Phasing of the project

5.1 Project Schedule

5.1.1 Studies schedule

Shipyard shall include a schedule for each engineering study in the offer. For each study, Shipyard shall indicate:

- The date when Shipyard needs to have the inputs from the Owner at the latest.
- The date when the Shipyard will start the study
- The date when the Shipyard will schedule to finish the study.

All studies to be performed by the Owner are detailed in dedicated specification sections. A particular attention is to be paid on the following studies:

- New HVAC equipment integration.
- Double pelagic winch integration.
- -20°C cold room refurbishment
- Aft AFRAME jobs
- ITEM BV3 TOP C8 tank repairs

5.1.2 Dry dock, along quay work and trials schedule

The shipyard shall specify the total expected duration of the work, with the duration of the dry dock and dockside work. The Shipyard will be responsible of the dry-docking of the vessel, including block arrangement.

A detailed schedule including all works and main milestones shall be transmitted by the Shipyard to the Owner 3 months before the vessel arrival. This schedule shall include:

- Number of days needed to complete the work-scope (including docking and alongside time),
- The estimated date of arrival at which the shipyard can accept the RV *Thalassa* alongside wharfage,
- Draft limitations to enter in yard (alongside),
- The planned date for the dry-docking of RV *Thalassa*
- Draft limitations to enter in dock,
- The scheduled undocking date,
- The date that the vessel must undock due to external circumstances (to be detailed) if applicable,
- Yard working hours and applicable holidays during docking period if applicable,

For quay and sea trials, the Shipyard shall consider in the detailed schedule:

- 2 dedicated days for quay trials (or harbour acceptance tests HAT).
- 3 dedicated days for sea trials (or sea acceptance tests SAT).

1 month before the vessel arrival, the Shipyard shall confirm:

- the exact date of arrival at which the shipyard can accept the RV *Thalassa* alongside wharfage,
- the exact date for the dry-docking of RV *Thalassa*

A 24 hours' notice is required from the Shipyard to confirm the exact date (with exact hour) of arrival, dry-docking, as well as all port manoeuvres, to ensure the availability of the crew.

The Shipyard shall advise the Owner for any variation or delay from expected schedule.

5.2 Vessel entrance into Shipyard

5.2.1 Landing of the equipment, if necessary

The following equipment shall be unloaded by the Shipyard under the supervision of the Owner:

- Replaced HVAC circuit components such as compressors, condensers or evaporators
- Pelagic winch replaced
- Obsolete hydraulic motors
- Obsolete Motor-driven fire pump
- Equipment in the fishing laboratory
- Waste from the partitions of the -20°C scientific cold room
- Engine parts replaced by standard exchange, such as cylinder heads and turbos
- IT furniture (exact list will be supplied by the Owner)
- Security outfit and miscellaneous
- Paints

The Shipyard is in charge of the logistic (cranes, transport and storage) of these operations.

Scrapping of this equipment will be supported by Shipyard upon Owner's decision. This scrapping will include: the old winch, the old HVAC components, the old hydraulic motors, wastes of polyester, wood and metal.

This disposal of old equipment shall be done using appropriate recycling facilities. All associated costs will be borne by the shipyard.

All equipment definitely dismantled from the vessel and new equipment installed on board shall be weighted by the Shipyard, in order to perform a new balance of the vessel at the end of the work.

5.2.2 Storing of the equipment

Unloaded equipment

The equipment unloaded from the vessel shall be stored protected from rain, wind and dust, in the vicinity of the vessel. The total storage volume is 2 TEU.

Owner supplied equipment

In addition to the storage of equipment unloaded from the vessel, the Shipyard shall also provide storage facilities for all new equipment provided by the Owner. This includes:

- HVAC equipment: The total volume of HVAC new components is approximately 5 m3, and the total weight around 1 ton.
- New pelagic winch
- Mechanical equipment, furniture... as described in specifications.

Special requirements

A special attention shall be paid to storage of electronic and sensitive equipment. They must be kept in a dry, non-

condensing atmosphere, free from corrosive agents and isolated from sources of vibration. Unless otherwise specified, they must not be stored in temperatures below -10°C and above +40°C.

See Appendix for a preliminary list of all the equipment (unloaded or supplied by the Owner) that has to be stored in the Shipyard facilities, with details about dimensions and storage conditions.

The total cost of owner supplied equipment to be stored at the shipyard prior to installation is 0.5 M€.

5.2.3 Emptying of tanks / ballasts and gas freeing

Tanks will be emptied as far as practical by the crew before entry into the yard. All remaining fluids in tanks shall be removed by the Shipyard. The waste disposal shall be handled by the Shipyard and included in the offer. The Shipyard is responsible of disembarking, storage and reembarment of fuel, oil and lube oil as required to complete the work scope.

5.2.4 Inventory of fixtures

At the entrance in the yard, the Shipyard shall make an inventory of fixtures with the Owner (see CCAP 6.1). The state of each room and area shall be described and photographed in a report signed by both parties.

In addition to the inventory of fixtures the following documentation will be established:

- list of unloaded equipment and stored into the Shipyard,
- insulation folder of the electric circuits,
- type and quantity of the unloaded fluid,
- tanks and ballast condition.

5.3 Dry-docking

5.3.1 Preparation for the dry-docking

The Shipyard shall detail in its offer any matters related to its facilities that can possibly impact the quality of works or the docking schedule (maintenance of the dock, tide limitation...)

The Shipyard is responsible for the block arrangement and any blocks modification necessary to perform the required scope of works.

One docking plan corresponding to the Shipyard facilities shall be prepared by the Shipyard and submitted to the Owner for approval before dry-dock preparation.

The docking plan shall content calculated loads for each block according to the vessel's estimated weight at the time of the docking.

After completion of the blocks arrangement in the dock, the Owner's representative will be invited to check the block position prior to flood the dock.

If any block is to be removed during works completion, the Shipyard shall provide the Owner with corresponding updated block arrangement. Loads on blocks shall be calculated in order to avoid any consequences on the vessel integrity.

Upper parts of the blocks shall be made of hard wood topped with a layer of soft wood (pin).

Upper side blocks shall be designed as described in the drawing in appendix.

5.3.2 Realization of the dry-docking

Due to the important number of sensitive sensors and openings in the hull, a particular attention shall be made to the positioning of the vessel on the blocks. The accuracy of positioning shall be less than 10 cm on both axis, with 0° of list.

This operation shall be performed with a team of divers (to be included in the offer).

A white stripe on the frame number 12 can be used as a reference for vessel position. This mark must be centred on the corresponding block.

5.3.3 Draining and gas freeing

Opening and closing of bottom plugs shall be handle by the Shipyard and included in the offer. A vacuum test and cement is included.

The Shipyard shall drain the following tanks and ballasts (non-exhaustive list, refer to the work specified in sections 2 and 3 of this document):

- waste oil,
- sewage,
- bilge.

Each tank and ballast emptied shall be inspected. The state of each tank and ballast shall be described in a report signed by both parties.

5.4 Work preparation

5.4.1 Work preparation in accommodation

After cleaning, all floors shall be properly protected. The lower part of bulkheads in each alleyway shall be also protected.

Furniture, ceilings, walling, floorings etc. not modified during the Shipyard period shall be fully protected by the Shipyard against shock, dust, and water surrounding areas of works.

5.4.2 Dismantling and landing

All equipment, which is dismantled and landed during works, shall be owner's property. The Owner reserves the right

to enhance them. They shall be stored screened from rain, wind and dust in a locked area.

5.5 Acceptance test and trials

5.5.1 General

Quay and sea trials shall be carried out in accordance with the program approved by the Authorities, Classification society and the Owner to ensure correct performances of all machinery, equipment and systems.

Exact list of equipment and test program for workshop, during installation, quay and sea acceptance tests shall be defined according to mutual agreement following the Quality Control Plan. It shall cover all equipment included in this specification.

When possible, machinery and systems shall also be properly function tested alongside before sea trials.

Detailed reports for workshop, quayside and sea trials shall be supplied by the Shipyard for each trial.

See Appendix S1G for a preliminary list of trials (quay and sea trials), with details about responsibilities, estimated duration and assistance required from the shipyard.

5.5.2 Workshop testing and trials during installation

Based on Quality Control Plan, trials and control in workshop and during installation have to be conducted with the Owner's representatives for main equipment (list to be mutually agreed between the Owner and the Shipyard).

5.5.3 Lifting appliance trials

All lifting appliances shall be tested according to class and ILO requirement.

Load test shall be carried out in accordance with classification society requirements for all lifting appliance (in particular new and modified equipment) and shall be recorded in the lifting appliance register. Testing procedure shall be presented by Shipyard for validation by the Class surveyor and the Owner.

The Class surveyor will be contracted directly by the Owner.

The Shipyard will provide the loads for the tests.

5.5.4 Quay trials

The list of equipment to be tested and the testing procedure will be validated as described in CCAP XX.

Quay trials schedules and list shall be submitted to the Owner, 1 month before trials for approval.

For OSE equipment, the Shipyard shall organize the installation on-board as well as the interfaces and functional commissioning trials.

In addition to the quay trials, The Shipyard will have to perform a final stability test, as described and in CCAP 6.1.

5.5.5 Sea trials

Sea trials shall be carried out with the attendance of Class, Owner, Shipyard and maker's representatives once the vessel stability tests, quay trials are validated.

Performance thereof shall be approved by the Owner prior to work admission.

During sea trials, the vessel should be ballasted down to trial draught on even keel.

Fuel, oil, water and consumables will be paid by the Owner, except in the case where additional sea trials should be carried out due to the Shipyard. All the representatives will be accommodate on-board during the trials at the Owner's expense, within the limit of the capacity of the vessel.

The list of people that shall attempt the trials shall be agreed between all the parties 1 week prior to proceed at the latter. See Appendix for a preliminary list of trials (quay and sea trials).

5.6 Work admission

After acceptance test, trials and general inspection of the vessel afloat, the Owner will pronounce work admission, reservation or rejection as described in CCAP article 6.

- Following conditions shall be fulfilled:
- State of each room, insulation folder of the electric circuits and state of tanks and ballast to be agreed by the both parties,
- Embarking and checking of all equipment and parts landing before works,
- Acceptance of all the test and trials,
- Delivery of certificates,
- Delivery of documentation.

Work Acceptance Form shall be signed by both parties at the vessel delivery. The warranty period will start at the time of the Work Acceptance Form signature.

6 Common specification

6.1 Exploitation and environmental conditions

- Transit speed 11kts

6.1.1 In summer period

- Outdoor air temperature 42°C,
- Seawater temperature. 33°C,
- Indoor air temperature 45°C,

- Hygrometry 95%.

6.1.2 In winter period

- Outdoor air temperature -15°C,
- Seawater temperature -2°C
- Indoor air temperature 10°C,
- Hygrometry 95%.

6.1.3 Sea states

The relationship between sea state and mean significant wave height is as defined by the World Meteorological Organisation (See also A.R.J.M. Lloyd "Seakeeping Ship Behaviour in Rough Weather", section 5.2; table 5.1, Ellis Horwood series in Marine Technology).

The areas to be considered are:

- Atlantic ocean,
- North Sea,
- Mediterranean Sea

Wind conditions to consider are those statistically considered for those sea states level in the listed areas.

6.2 Stability

The final stability report was published in 2018 following the 2017 mid-life review.

Approved stability booklet is provided in the stability file (see appendix).

Within its scope of work, the Shipyard shall be responsible for the compliance of the vessel stability with all relevant rules and regulation as described in Applicable regulations, with no additional restriction compared to the one in force before technical stop situation.

6.3 Resistance to marine use

All equipment and material supplied by the Shipyard shall be prepared for working in a harsh marine environment.

To select a material for use in marine conditions, a deep and global analysis shall be performed on all aspects of required properties. When needed, trials shall be performed by Shipyard to help to make the right decision, according to standard NF XP X 10-800.

This standard also applies to all scientific equipment and hardware either supplied or installed by Shipyard.

6.3.1 Hardware families

Four equipment and hardware families have been defined according to those marine conditions involved in operations. Those families apply only on equipment and hardware that may be dismantled including fixing systems or that are locally welded to the vessel's structure:

- hardware fitted on any external deck,
- hardware submerged in sea water, either set on quick works or on pipes,
- hardware set in normally air-conditioned rooms,
- hardware set in non-air-conditioned rooms.

Elements or hardware fitted to the hull, and which are impossible or very difficult to dismantle, shall comply with those principles regarding surface preparation and protection as painting system:

- quick works, rudders, shaft lines, thrusters, fairings,
- upper works, superstructures, funnels, masts, bulwark, railings,
- lifting gear, external doors, watertight doors and panels.

Steel machined and finished areas shall be phosphatized.

6.3.2 Hardware fitted on any external deck

By analogy, those hardware are considered as family E1 within NF XP X 10-800 standard. Selected materials shall be resistant to marine conditions and of the following types:

- Appropriate plastic materials,
- Stainless steel at least equivalent to 1.4404,
- Cupro-nickel and aluminum-copper,
- Steel materials are only accepted for the following equipment,
- Outward pipes shorter than 1 meter,
- Highly resisting screw-products (class 8.8 and upper classes),
- Pipes and components for hydraulic plants (galvanization $e > 70\mu\text{m}$ and $m > 500\text{gr/m}^2$).

Electrical equipment and hardware shall have at least the following safety degrees IP67 on unsheltered or weather decks.

6.3.3 Hardware submerged in sea water

By analogy, those hardware are considered as family E2 within NF X 10-800 standard. Selected materials shall be highly resistant to marine conditions and of the following types:

- appropriate plastic materials,
- stainless steel at least equivalent to 1.4404 if water speed is > 1.5 m/s,
- stainless steel at least equivalent to 1.443x (as example 254SMO) if water speed is ≤ 1.5m/s,
- cupro-nickel and aluminum-copper,
- steel materials are prohibited.

6.3.4 Hardware set in non-air-conditioned rooms

By analogy, those hardware are considered as family I2 within NF X 10-800 standard. Selected materials shall be resistant to marine conditions and of the following types:

- appropriate plastic materials,
- stainless steel at least equivalent to 1.4307,
- cupro-nickel and aluminum-copper.

Steel materials are only accepted if they are covered with a protective film, at least 50µm thick.

Electrical equipment and hardware shall have at least the following safety degrees IP56 in wet laboratories and wet rooms.

6.3.5 Hardware set in air-conditioned rooms

By analogy, those hardware are considered as family I1 within NF X 10-800 standard. Selected materials shall be resistant to marine conditions and of the following types:

- appropriate plastic materials,
- materials covered with a passive enabled film,
- copper or aluminium alloys.

Steel materials are only accepted if they are covered with a protective film at least 20µm thick. Electrical equipment and hardware shall have at least the following safety degrees IP44 in scientific rooms.

6.4 General steelworks

6.4.1 Generality

The minimum scantling shall be according to the Bureau Veritas' requirements. At the Owner's request, the scantling of certain parts could be increased.

New parts shall be steel constructions under the surveillance of the Bureau Veritas. This surveillance shall cover all the successive phases leading to the delivery of the required certificates. Material acceptance certificates of type 3.1.B shall be delivered for a list of materials established by the Owner, particularly for shell crossings, the other certificates being available for consultation at the Shipyard, metal sections and pipes.

The Shipyard shall provide all certificates required by class such as welder certificates, material certificates and welding protocols (WPS, PQR)

6.4.2 X-ray and Ultrasonic testing of steel works

On all new parts or new welds, the Shipyard shall carry out the non-destructive tests asked by the Bureau Veritas and shall provide for the additional NDT required by the specified quality standards.

6.4.3 Welding Steel Construction

Butt welds are continuous and, as a general rule, the fillet welds consist of two continuous full penetration beads.

In order to minimize deformation, intermittent fillet welding or one side welding can be used with the Owner agreement deck except when the double continuous welding is required for structural purpose.

All overboard connections shall be welded "full penetration". A welding table for the new steel structures has to be worked out by the Shipyard and approved after mutual agreement with the Owner.

6.5 Painting system

All the works concerning the preparation of surface and the application of paint are carried out in compliance with the paint manufacturer's instruction.

A paint maker's representative will be appointed by the Owner for advisory purpose. The paint supplier representative will report directly to the Owner. Any change on the scope of works or in the specification that could be suggested by the paint supplier's representative shall be confirmed by the Owner.

In addition to painting works specified in Part F, painting system shall be applied or restored according to painting system following Owner's requirements for all upgrade works, maintenance works and after welding, grinding and damage of painted area.

The paint will be supplied by the Owner and delivered to the Shipyard. The Shipyard will provide the Owner with a regular paint consumption report.

A hull inspection with the Owner, the paint supplier's representative and the Shipyard's representative will be held at the beginning of the docking period and the final scope of works will be outlined at that time.

An inspection regarding the protection is to be done prior to perform apply any coat with airless.

The paint application with airless shall be avoided in windy condition to limit overspray and paint consumption.

All works performed on or near scientific equipment and transducers shall be done with great care. Owner's representatives shall be advised before proceeding.

The Shipyard will perform all relevant quality controls and provide a dedicated report for the Owner. Painting condition shall be presented to the Owner for validation prior to apply any coat.

The controls and reports shall cover, but is not limited to:

- Areas concerned
- Surface preparation
- Thickness measurement
- Salt test for ballast
- Surface temperature, humidity and dew point

The Shipyard shall handle and support all the necessary means to achieve a high standard quality works according to the specification. This include access, venting, lighting, blasting, surcharges for anti-fouling grits, tins residue and empty drums disposal, washing, paint preparation and paint application, protection of surrounding area. Equipment and consumable such as rollers is to be included.

Set-up costs shall include the cleaning and disposal of all blasting grit from the decks, accommodation and dry dock on completion of blasting.

Port holes, vent openings and transducers shall be protected before blasting. Transducer protecting covers are provided by the Owner.

Surface preparation is to be considered according to standard ISO 8501-4. If sand blasting is not possible, Hydro blasting could be considered with spots edges mechanical softening.

6.6 Other general specification

For scientific sample quality purpose, the starboard side of the vessel is a clean side. That means that no overboard discharge is performed on starboard side. All new discharge outlets (engine shell, ballast, outgoing waters, strainers...) shall be installed on portside, except at quayside and for gutter pipes outside accommodations.

When designing new cable trays, in order to eliminate disturbances upon sensitive equipment, Shipyard shall provide for separate cable trays for power cables, for sensitive cables, and for acoustic cables. Electro-magnetic compatibility shall be studied to ensure sensitive equipment does not suffer from high-powered equipment. Cable trays for sensitive cables (analogic and numeric) are to be physically separated from power cabling according IEC 60533.

In general, when a door is changed or modified, cylinder shall be kept or new cylinder shall be provided according to the existing key organization chart. For new door, cylinder shall be integrated in this key organization chart (ISPS Code).

In general, when a ceiling, lining or flooring is replaced by a new one, all exiting inspection holes or others openings shall be maintained and kept operational.

6.7 Sustainable development and eco-responsibility

The Shipyard shall recycle or make sure that all materials and product dismantled on the ship shall be recycled.

In the same way, waste oil, sewage and bilge of the ship shall be treated according to environmental rules.

Dry dock shall be cleaned before flooding and equipped with a system for treatment of bilge water when applicable.

When the ship is along the quayside, some means shall be in place in way to preserve water in case of accident pollution.

Materials for upgrade works shall be chosen for its environmental quality. Shipyard could propose variants in the aim of increase sustainable development and eco-responsibility.

Certificate of disposal will be provided to the Owner for all fluids, waste & equipment removed from the vessel.

6.8 Noise and vibration requirements

During the execution of the works, the Shipyard shall pay particular attention to the integration of the equipment so as not to degrade the current airborne noise levels and to respect the target self-noise levels on the acoustic sounders.

6.8.1 Vessel configurations

Three configurations of the vessel shall be considered:

- C1: Vessel underway, at service speed (11 knots).
- C2: Vessel on bathymetric survey, between 4 and 10 knots.
- C4: Vessel in station with or without DP mode with low gain, at sea state 5.

6.8.2 Contractual means required by the Owner regarding noise and vibration

The minimum requirements regarding design, mounting precautions and controls requested by the Owner are described in appendix .

6.8.3 Contractual airborne noise levels to be respected

The Shipyard will ensure that all new equipment is fitted with appropriate decoupling devices to prevent the transmission of vibrations through the hull. Where specified, vibration dampers will be changed.

The Shipyard shall ensure that the works will not degrade noise levels in the cabins, Scientific PC and laboratories. The Owner will reserve the right to perform noise measurements during sea trials in these rooms, mainly in DP conditions. In the event that measurements after works will exceed the requirement, the Shipyard will be borne to take corrective

actions.

For measurement methods (including tolerances on maximum authorised values), the BV COMF NOISE grade 1 requirements will be applied.

The requirements are:

<i>Designation</i>	<i>Max. values in dB(A) ref 20 µPa</i>	<i>Vessel's configuration</i>
Scientific PC	< 57	C1, C2, C4
Laboratories	< 65	C1, C2, C4
Cabins	< 52	C1, C2, C4

Acoustic equipment emissions operating in audible frequency range (20 Hz to 20 kHz) shall be taken into account when dimensioning acoustic insulation. Special attention shall be paid regarding sub-bottom profiler.

6.8.4 Self-noise levels

The self-noise is determined by subtracting from the electric spectrum level N_e (unit spectral dB reference 1 volt, dB.V / sqrt(Hz)), the transducer receiving sensitivity Sh (unit dB.V/ micro-Pascal) and the gain of the electronic pre-amplifier G , without taking into account the directivity index.

$$N_s = N_e - Sh - G$$

7 Asbestos

Owner is maintaining all relevant certificates and asbestos analyses are available on request.

If a reasonable doubt is emitted on the presence of asbestos on-board, appropriate analyses shall be handled by the Shipyard and invoiced at cost to the Owner.

All materials used by the Shipyard in relation to the repairs within this specification are to be asbestos free, and all relevant certificates shall be held to the Owner's representative.

If at any time a material is suspected to contain asbestos, material is to be tested and asbestos free certificates to be provided by the Shipyard to the Owner's representative

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A2.002_4 engines suspension studs replacement 2

A2.100_DIESEL GENERATOR 1 - TOP END 3

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To be executed by: Yard

Description:

4 Engines Figures :

Maker : CATERPILLAR

Types : 3512B x2 1257 kW @ 1500 rpm - 12 cylinders

Types : 3508B x2 856 kW @ 1500 rpm - 8 cylinders

DG1 3512B Stbd EXT: Expected running hours : 12500 hrs

DG2 3508B Stbd INT: Expected running hours : 31500 hrs

DG3 3508B Port INT : Expected running hours : 31500 hrs

DG4 3512B Port EXT: Expected running hours : 12500 hrs

Depending on effective running hours at the time of the docking, some works could be cancelled.

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

All spare parts are owner's supply, except if the contrary is clearly expressed in the specification.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

List of attachments:

1) AC 7-50_A - Panneau REP 4 Pont B Sortie des Pièces Machines.pdf, 1.99 MB

2) AC 7-51_A - Panneau REP 11 Pont C Sortie des Pièces Salle de Tri.pdf, 1.91 MB

To be executed by: Yard

Description:

Works shall be performed by an a CATERPILLAR representative contracted by yard

Saves a copy of engine configurations, histograms, details of alarms and faults

alarms and faults recorded in the ECUs of each engine.

The copy shall be provided to the owner's on a dedicated dongle

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Caterpillar ET control case	Saves a copy of engine configurations, histograms, details of alarms and faults alarms and faults recorded in the ECUs of each engine.	Per unit	1.0

To be executed by: Yard

Description:

Studs removal on the 2nd floor :

Remove the studs on the 2nd floor and replace them with spacers on DG3 and DG4.
(This work have been already done on DG1 and DG2, and can be used as exemple)

- Manufacture or supply of spacers by worksite
- Removal of old studs / fitting of spacers

Replacement of 48 floor studs:

Replacement of all Rubber design studs (supplied by ENERIA 2017) with SOCITEC studs

12 x BFN45-800 X2 motors = 24 DG2 & DG3 studs

12 x BFN45-1080 X2 motors = 24 DG1 & DG4 studs

Screws and bolts supplied by SEMIM

Modifications to the frames with the creation of openings for the installation of all the studs

Alignment checking:

On completion of the work: Check the motor/alternator alignment for each DG. Adjustment is included if necessary.

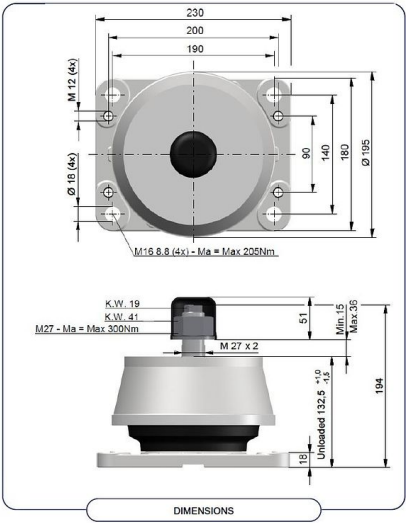
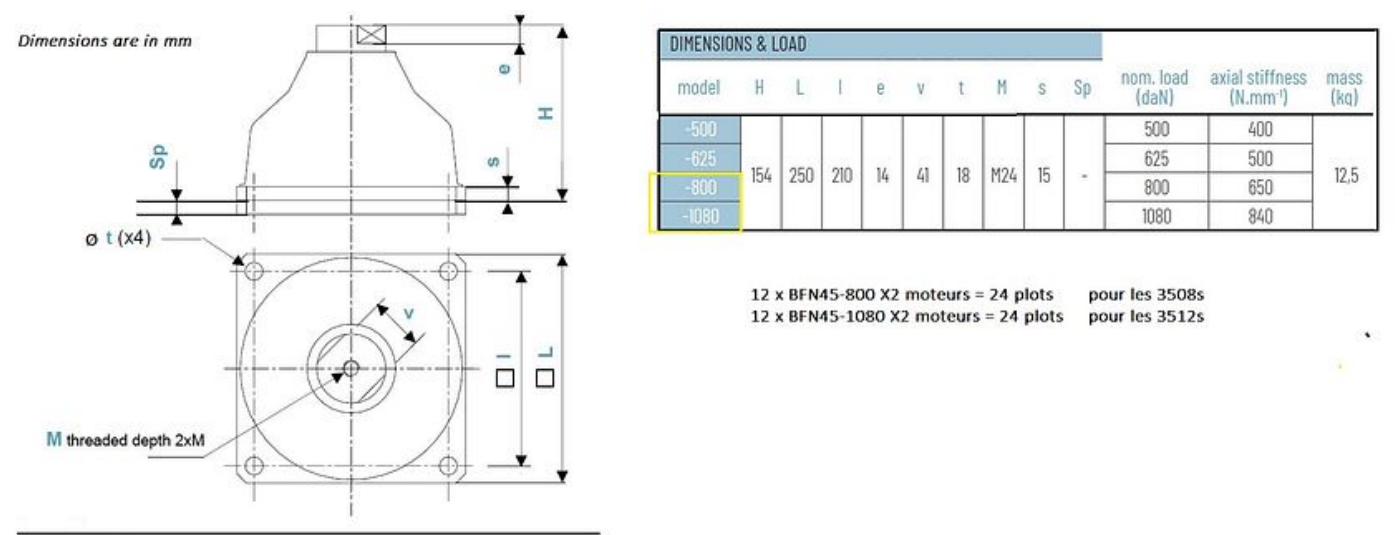
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
4 engines suspension studs replacement_Studs removal on the 2nd floor		Per unit	1.0
4 engines suspension studs replacement_Replacement of 48 floor studs:		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

Works shall be performed by an a CATERPILLAR representative contracted by yard

A2.101 - Cylinder heads overhaul

- Removal of rocker covers and rocker arms
- Removal of cylinder heads
- Replacement of cylinder heads with standard replacements
- Visual inspection of injector rocker arm and valve stems
- Replacement of all new-generation: cylinder head gaskets, water and oil passages, rocker arm cover gaskets
- Check rocker arms
- Replacement of aluminium counter plates with steel counter plates: Requirement Caterpillar upgrade for all 3500 marine series
- Cleaning the engine block
- Visual check of the condition of the cylinder liners
- Reassembly of all cylinder heads and accessories
- Replacement of water rail gaskets and intake and exhaust manifolds
- Re-adjust rocker arms and valves

A2.102 - Injector replacement

- Removal of all pump injectors
- Replacement of injectors with standard replacements injectors,
- Refitting the injectors
- Recording of injector codes in the ECM calculators
- Checking the diesel feed pump
- Checking valves on diesel circuits
- Checking the fuel priming pump
- Replacement of fuel rail seals
- Re-adjust injector rocker arms

A2.103 – Turbocharger/ Cartridges replacement

- Removal of 2 turbos
- Replacement of turbo cartridges with standard exchanges
- Checking the exhaust system
- Removal of insulation
- Checking the bellows and gaskets on the exhaust manifolds
- Refitting the insulation
- Removal of air cooler
- Cleaning the wiring harnesses
- Replacement of seals and reassembly on board

A2.104 – Camshaft

- Open the 2 camshaft inspection covers
- Visual inspection of injection and valve cams
- Visual inspection of the cam followers
- Refit the inspection plates

A2.105 – Oil circuit

- Remove GE oil cooler
- Cleaning
- Replacement of seals, reassembly, proof of no leak

A2.106 – Thermostatics elements

- Replacement of HT & LT thermostats
- Replacement of seals

A2.107 – Miscellaneous

- Checking the wiring harness
- Removal, cleaning and re-installation of starters
- Empty and loaded tests
- Supply of consumables, degreaser, paint, sandpaper

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
DIESEL GENERATOR 1 - TOP END		Per unit	1.0

To be executed by: Yard

Description:

Works shall be performed by an a CATERPILLAR representative contracted by yard

A2.401 - Cylinder heads overhaul

- Removal of rocker covers and rocker arms
- Removal of cylinder heads
- Replacement of cylinder heads with standard replacements
- Visual inspection of injector rocker arm and valve stems
- Replacement of all new-generation: cylinder head gaskets, water and oil passages, rocker arm cover gaskets
- Check rocker arms
- Replacement of aluminium counter plates with steel counter plates: Requirement Caterpillar upgrade for all 3500 marine series
- Cleaning the engine block
- Visual check of the condition of the cylinder liners
- Reassembly of all cylinder heads and accessories
- Replacement of water rail gaskets and intake and exhaust manifolds
- Re-adjust rocker arms and valves

A2.402 - Injector replacement

- Removal of all pump injectors
- Replacement of injectors with standard replacements injectors,
- Refitting the injectors
- Recording of injector codes in the ECM calculators
- Checking the diesel feed pump
- Checking valves on diesel circuits
- Checking the fuel priming pump
- Replacement of fuel rail seals
- Re-adjust injector rocker arms

A2.403 – Turbocharger/ Cartridges replacement

- Removal of 2 turbos
- Replacement of turbo cartridges with standard exchanges
- Checking the exhaust system
- Removal of insulation
- Checking the bellows and gaskets on the exhaust manifolds
- Refitting the insulation
- Removal of air cooler
- Cleaning the wiring harnesses
- Replacement of seals and reassembly on board

A2.404 – Camshaft

- Open the 2 camshaft inspection covers
- Visual inspection of injection and valve cams
- Visual inspection of the cam followers
- Refit the inspection plates

A2.405 – Oil circuit

- Remove GE oil cooler
- Cleaning
- Replacement of seals, reassembly, proof of no leak

A2.406 – Thermostatics elements

- Replacement of HT & LT thermostats
- Replacement of seals

A2.407 – Miscellaneous

- Checking the wiring harness
- Removal, cleaning and re-installation of starters
- Empty and loaded tests
- Supply of consumables, degreaser, paint, sandpaper

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
DIESEL GENERATOR 4 - TOP END		Per unit	1.0

To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.
Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.
All works shall be performed as per BV rules, the best industry practices and the relevant regulation.
NDT, Welder and material certificates shall be provided as per class requirements
Protection and Cleaning of works surrounding area shall be done and included in the offer.
Fire watch and permits are included on a lumpsum basis when necessary.
Sufficient ventilation shall be provided by yard and included in the offer.
Access works, handling, lifting and staging are included on a lumpsum basis when necessary.
Transport to workshop is included when necessary.
Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.
A detailed report is to be provided for all works.
Asbestos free certificates shall be provided for gaskets and new ceilings upon request.
Tools are provided by yard when works are done under yard responsibility.
Grease and lubricant shall be applied when required (owner supply)
Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.
Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.
All gases have to be recovered and refilled in the systems when applicable, and quantities shall be recorded.
Equipment calibration certificates shall be provided to the owner when requested.
When a pressure test is performed, the corresponding certificate shall be provided to the owner.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:


Name	Description	Quote type	Quantity
general		Per unit	1.0


List of attachments:

- 1) 12_1_1-Manuel Technique-Climatisation-Ventilation_Equipement Frigorifique.PDF, 2.38 MB
- 2) CH12-Plan-Schema Frigorifique-Chambres A Poissons-94081246_C.pdf, 329 KB
- 3) CH12-Plan-Schema Frigorifique-Frigo Vivres-94091276_C.pdf, 548 KB
- 4) CH12-Plan-Schema Frigorifique-Surgelateur A Pain-94091274_B.pdf, 2.23 MB
- 5) CH12-Plan-Schema Frigorifique-Tunnel de Congelation-94081247_C.pdf, 328 KB
- 6) EM 15(1-2)_D - Aménagement Cambuse du 83 au 90.pdf, 6.6 MB
- 7) EM 15(2-2)_B - Aménagement Cambuse du 78 au 83 (CHAI) (09.10.95).pdf, 4.22 MB
- 8) EM 16(1-3)_B - Aménagement Chambre froide Tribord Viandes (09.10.95).pdf, 10.5 MB
- 9) EM 16(2-3)_B - Aménagement Chambre froide Babord Légumes Poissons Pain (09.10.95).pdf, 4.46 MB
- 10) EM 16(3-3)_B - Aménagement Chambre froide SAS.pdf, 2.17 MB
- 11) PAUMIER -- Liste des plans.pdf, 26.7 KB

Images:


(Images start on next page)


 MS 1_J - Schéma de Réfrigération Nomenclature.pdf


 MS 1_J - Schéma de Réfrigération.pdf


Chambre	Volume	Température de service	Evaporateur
Tunnel congélation	2 m3	-40°C	KUBA SGB91
Local déchets	13 m3	0°C	HELPMAN LEX6N
Chais	24.5 m3	12°C	HELPMAN LEX8
Chambre à pain	5 m3	-20°C	HELPMAN LEX8E
Cambuse	77.5 m3	13°C	HELPMAN LEX8
Chambre à poisson	13.5 m3	-26°C	HELPMAN LEX4E
SAS	29.5 m3	4°C	HELPMAN PLV15
Chambre à légumes	37 m3	2°C	Type HELPMAN LEX14- remplacé en janvier 2024
Chambre à viande	29 m3	-20°C	Type HELPMAN LEX16E- remplacé en décembre 2023


Chambre	Volume	Temp. De service	Evaporateur
Cale à poisson 0°C	20 m3	0°C	HELPMAN LEX16
Cale à poisson -20°C	28 m3	-20°C	HELPMAN LEX16E
Cale à poisson -40°C	8 m3	-40°C	?


 EM 15(1-2)_D - Aménagement Cambuse du 83 au 90.pdf


 EM 15(2-2)_B - Aménagement Cambuse du 78 au 83 (CHAI) (09.10.95).pdf


 EM 16(1-3)_B - Aménagement Chambre froide Tribord Viandes (09.10.95).pdf


 EM 16(2-3)_B - Aménagement Chambre froide Babord Légumes Poissons Pain (09.10.95).pdf

 EM 16(3-3)_B - Aménagement Chambre froide SAS.pdf


 EM 32(1-2)_C - Aménagement de la Côle à Poissons (09.10.95).pdf


 EM 32(2-2)_D - Aménagement de la Côle à Poissons.pdf


 EL 420 05_D EF3405 (PAUMIER).pdf


 EL 420 14_B EF16 (PAUMIER).pdf

 EL 420 15_C EF4107 (PAUMIER).pdf


 EL 420 15_D EF3809 (PAUMIER).pdf


 EL 420 18_B EF4007 (PAUMIER).pdf

 EL 420 20_C EF4006 (PAUMIER).pdf

 EL 420 21_D EF44 (PAUMIER).pdf


 EL 420 22_A EF4311 (PAUMIER).pdf


 12_1_1-Manuel Technique-Climatisation-Ventilation_Equipement Frigorifiqu...


 94.04.1191_L - Shéma Unifilaire Ventilation Pont AB.pdf


 94.04.1192_L - Shéma Unifilaire Ventilation Pont CD.pdf


 94.04.1193_G - Shéma Unifilaire Ventilation Pont EF.pdf


 6032.01 - Climatiseur PC Machine.pdf

 AT Thalassa 2017 - Docs PAUMIER - Equipements de Climatisation et Ventilati...

 CH12-Plan-Schema Frigorifique-Chambres A Poissons-94081246_C.pdf

 CH12-Plan-Schema Frigorifique-Surgelateur A Pain-94091274_B.pdf

 CH12-Plan-Schema Frigorifique-Tunnel de Congelation-94081247_C.pdf

 CH12-Refroidis A Eau Condenseurs Desurchauffeurs.pdf

A3.001_General air conditionning Compressors SKID replacement A3.001

To be executed by: Yard, Specialist

Owner supplies:

PO Number	Name	Supplier	Delivery date	Delivery location
	Fourniture d'un skid CLIMATISATION et d'une armoire électrique	BRONSWE RK	--	

Description:

- Provide bottles for fluid recovery and recover the gas from the installation (30Kg x3)
- Arrange for the removal of machines with their accessories such as pressure gauges and their connections, the oil/ evacuation/storage/disposal
- Suggest a proper technological solution for removing and installing new equipment. A technical opening of the ship's hull may be considered. Price shall be included in the offer.

All these elements must be removed:

- Evaporator located on the ceiling
- Compressors x3
- Condensers x3
- Current compressor supports with all peripherals
- NB: Only the first support should remain on the floor**
- The electrical cables must all be identified in the electrical panels, which remain in place.

- New equipment handling to it's final location.
- Fabricate new piping connections : Fresh water for condensers, glycol water tu supply vessel's AHU
- Electrical connections
- Commissioning assistance with owner specialist

Nota Bene:

- Details drawings are not available yet and will be provided in the next revision prior to the visit onboard.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
General air conditionning Compressors SKID replacement	<ul style="list-style-type: none"> - Providing for fluid recovery - Arrange for the removal of machines with their accessories such as pressure gauges and their connections/ evacuation/storage/ waste treatment - Propose to the owner the most rational and least expensive solution for removing and installing new equipment. A breaching of the ship's hull may be considered. - Provision for handling new equipment - Provide new piping connections Fresh water for condensers, gas for evaporators - Electrical connections - Commissioning assistance with owner specialis 	Per unit	1.0
CF.D.018_Breaching ship's hull		Per unit	1.0

To be executed by: Yard, Specialist

Owner supplies:

PO Number	Name	Supplier	Delivery date	Delivery location
	Fourniture d'un skid FRIGO-VIVRES et d'une armoire électrique	BRONSWE RK	--	

Description:

- Provide bottles for fluid recovery and recover the gas from the installation (22kg)
- Arrange for the removal of machines with their accessories such as pressure gauges and their connections, the oil/ evacuation/storage/disposal

All these elements must be removed:

- Compressors x2
- Condensers x2
- Current compressor supports with all peripherals
- NB: Only the first support should remain on the floor**
- The electrical cables must all be identified in the electrical panels, which remain in place.

- Propose to the owner the most rational and least expensive solution for removing and installing new equipment. A technical opening of the ship's hull may be considered. Price shall be included in the offer.
- New equipment handling to it's final location.
- Fabricate new piping connections : Fresh water for condensers, gas for evaporators. Pressure test shall be done on all pipes. Tightness test/ leak detection using NIDRON shall be done on gaz pipes
- **Brazing alloys in inert media**
- Electrical connections
- Commissioning assistance with owner specialist

Nota Bene:

- Details drawings are not available yet and will be provided in the next revision prior to the visit onboard.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Provision Plant Compressors SKID replacement	<ul style="list-style-type: none"> - Providing for fluid recovery - Arrange for the removal of machines with their accessories such as pressure gauges and their connections/ evacuation/storage/ waste treatment - Propose to the owner the most rational and least expensive solution for removing and installing new equipment. A breaching of the ship's hull may be considered. - Provision for handling new equipment - Provide new piping connections Fresh water for condensers, gas for evaporators - Electrical connections - Commissioning assistance with owner specialis 	Per unit	1.0
CF.D.018_Breaching ship's hull		Per unit	1.0

A3.003_Recovery and storage of gas from the scientific plant's A3.003

To be executed by: Yard

Description:

As major work is taking place in the -20°C cold room, it will be necessary to:

- Provide bottles for fluid recovery and recover the gas from the installation (14Kg)
- Secure the pipes carrying the gas to the -20°C evaporator
- Secure the power supply to the lighting, evaporator and safety devices

Once the refurbishment work on the cold room has been completed, the worksite must include :

- Replace the evaporator
- Reconnect the evaporator (gas and electricity)
- Replace the lighting and switches
- Replace the safety devices
- Tightness test/ leak detection using NIDRON gaz

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Recovery and storage of gas from the scientific plant's	As major work is taking place in the -20°C cold room, it will be necessary to: Recover the gas from the installation Secure the pipes carrying the gas to the -20°C evaporator Secure the power supply to the lighting, evaporator and safety devices Once the refurbishment work on the cold room has been completed, the worksite must include : Replace the evaporator Reconnect the evaporator (gas and electricity) Replace the lighting and switches Replace the safety devices Tightness test/ proof of no leak NIDRON	Per unit	1.0
Approach and reinstallation of refrigeration equipment		Per unit	1.0

To be executed by: Yard, Specialist

Description:

- Gases have been purged beforehand
- Evaporators supplied by the owner
- Removal of old evaporators/ Disposal
- **Identification of all connections in the electrical panels**
- Equipment handling
- Fixing in the cold rooms in accordance with the drawing in annex
- Connection of fluids and electricity
- Tightness tests
- Commissioning with the specialist contracted by the owner

NB: A leak detector is to be installed in the waste room only. The electrical cable shall be laid and connected to the monitoring station on deck A. GENAVIR supplies the detector and the shipyard supplies the electrical cable for a distance of +/- 15 meters with 2 decks to pass by technical duct.

List of 6 evaporators to be replaced:

- ☐ SAS (more powerful) to meet hygiene and food safety regulations
- ☐ Waste room + leak monitoring
- ☐ Wine cellar
- ☐ Bread room
- ☐ Baking room
- ☐ Fish room

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
SAS evaporator		Per unit	1.0
Waste room evaporator + leak monitoring		Per unit	1.0
Wine cellar evaporator		Per unit	1.0
Bread room evaporator		Per unit	1.0
Baking room evaporator		Per unit	1.0
Fish room evaporator		Per unit	1.0

To be executed by: Yard, Specialist

Description:

Annual visit as per maker's recommendation

Certificate of visit

De Dietrich

GT_GTM 309 E

210/280 kW

9 elements

smoke mass flow rate : 463 kg per hour

The ship repair yard must provide us with a specialist approved for this type of maintenance.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Annual inspection of the oil-fired boiler		Per unit	1.0

A3.101 Carpentry extraction ventilation ducts and biology laboratory

To be included: Ventilation, Cleaning after

To be executed by: Yard

Surveyed by: Owner's representative

Description:

The air extracted from the carpentry room contaminates the biology laboratory through its own extraction.

This results in contamination of the laboratory by more or less toxic gases and dust from the carpentry in the linings and ceilings.

Creation of an access to analyse the problem:

- Removal of benches, fume hood and glass partition.
- Removal of cladding and ceiling if necessary (**Take opportunity of item G.007 to have a look**)

Solving the problem:

- Replace damaged flexible duct and correctly connect the fume hood and carpentry extraction.

The laboratory must be clean and tidy for the withdrawal and end of the worksite.

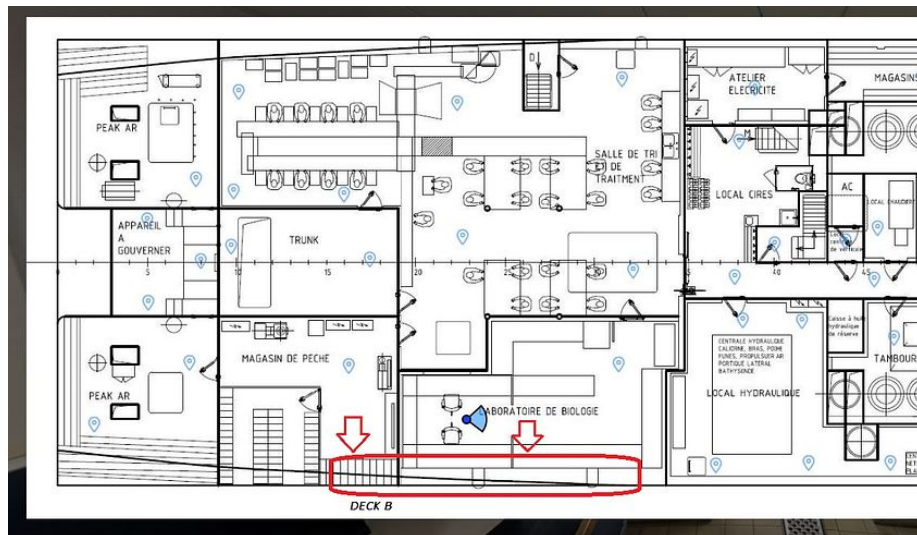
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Creating access		Per unit	1.0
Reconnection of 2 x 5m of flexible ventilation ducting		Per unit	2.0

Images:

(Images start on next page)





To be executed by: Yard

Description:

The ship repair yard is to make us a proposal for equipment that meets our requirements:

- Integration of a filter-holder box in the supply duct, with a degree of filtration adapted to galley sanitary regulations.
- Addition of a block of heaters in the kitchen supply duct to heat the air in the cold zone.
- ☐The heating elements must be internal to the duct.
- ☐They must be adjustable to several intensity levels
- ☐They must be controlled from the front of the kitchen next to the light switches as close as possible to their location.
- ☐These heaters will be powered from the galley electrical panel.

The quotation must take into account:

- The supply of equipment
- Approach work, dismantling and protection
- Installation of new components (filters, casings and resistors)
- Cleaning on site after works

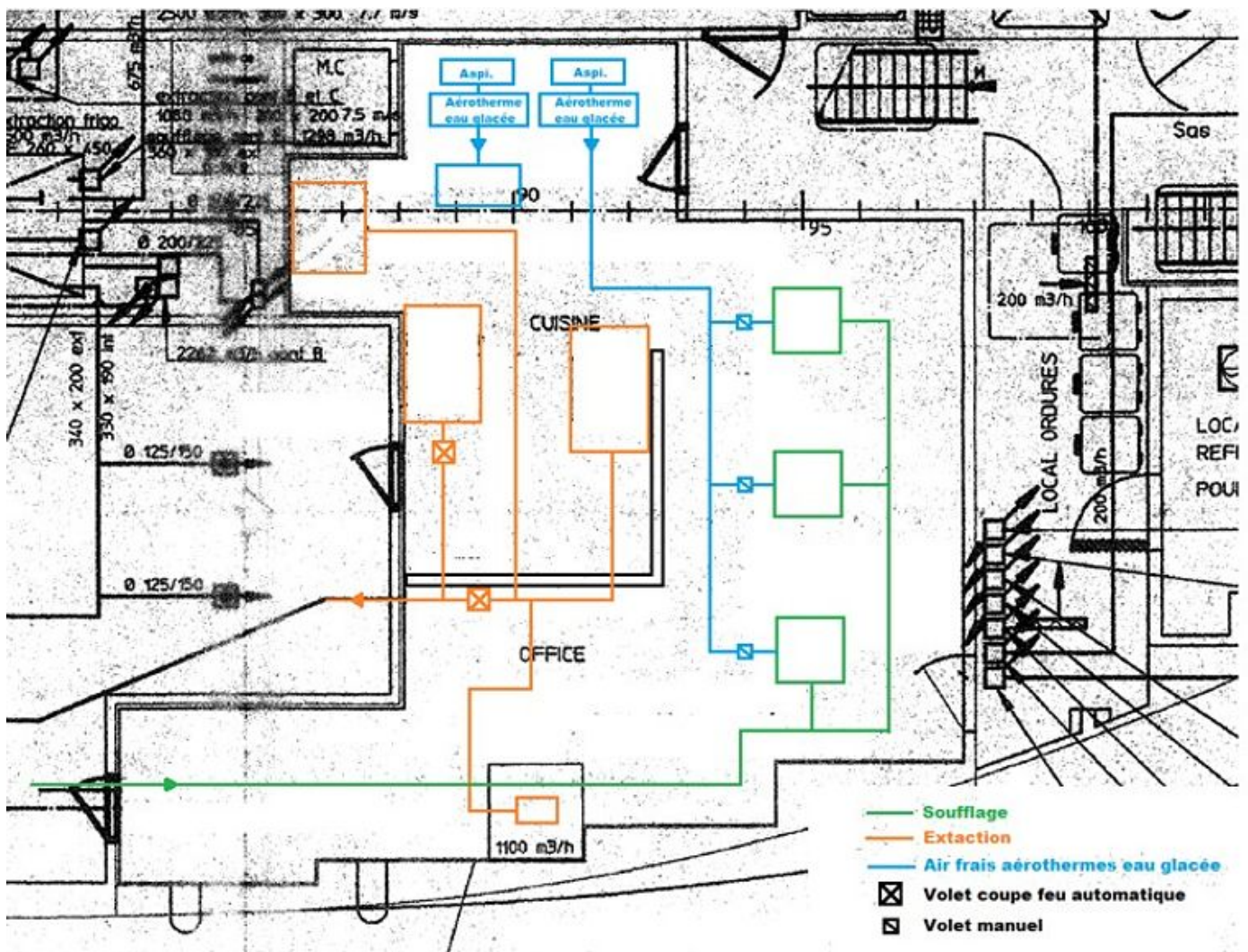
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Filters on galley fresh air supply		Per unit	1.0
Heating elements on galley fresh air supply		Per unit	1.0
Protection_access_electrical works_cleaning		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

The shipyard will provide the owner with a record form for each unit, indicating:

- the maker, type and characteristics of the unit visited,
- the reference of the parts replaced or adjusted and their location on the unit (coupling side or side opposite the coupling),
- the references of the V-rings, seals and other gaskets, the condition of the internal components,
- description of the work planned and any additional work,
- Record of the clearances and dimensions of the shafts, rings, bores, teeth/pump bodies, impellers/volutes, wear rings, etc. ..

Testing and running-in is included for this work

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

To be executed by: Yard

Description:

Ref. P6P 3R1 C9 A2A 00 DENISON

Hours: 15500

Last bench test: 2011 at 8740

Installation of the spare pump reffited in march 2021

Quotation for access work

Remove existing pump

Installation of the spare pump

Return the entire environment to its original state

Option: Reconditioning of the replaced pump to make it ready for use as a spare part.

Standard set of gasket for inspection is supply by yard and included in the offer. Additionnal repair works or spare parts will be quoted after inspection.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Installation of the spare pump reffited in march 2021		Per unit	1.0
Reconditioning of the replaced pump		Per unit	1.0

Images:



A4.003_132 KW HYDRAULIC DRIVE Fishing auxiliaries Starboard

To be executed by: Yard

Description:

Ref. P11V 3R1C 102A

Hours: 35720

Last bench test: 2011 at 22109

Installation of the new pump (genavir supply)

Quotation for access work

Remove existing pump

Installation of the new pump

Return the entire environment to its original state

Option: Reconditioning of the replaced pump to make it ready for use as a spare part.

Standard set of gasket for inspection is supply by yard and included in the offer. Additionnal repair works or spare parts will be quoted after inspection.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Installation of the new pump		Per unit	1.0
Reconditioning of the replaced pump		Per unit	1.0
Access works		Per unit	1.0

Images:



To be executed by: Yard

Surveyed by: Owner's representative

Material supply by: Owner

Description:

ITUR pump type AU-150/35 80 m3/h 132 Kg with motor

Location: front U-shaped passageway

-Disconnection of the electric motor,

-Removing the old pump

The pump will be left in the ship's machine shop

Replacement with a new pump supplied by GENAVIR : AU F-150-150-035 BB I09DM

- Handle the new pump to the Ushape passage way (160 kg)
- Modify the frame to accommodate the new model
- Modification of the piping to supply the new model
- Fit the new pump with the electric motor
- Connection of the electrical supply

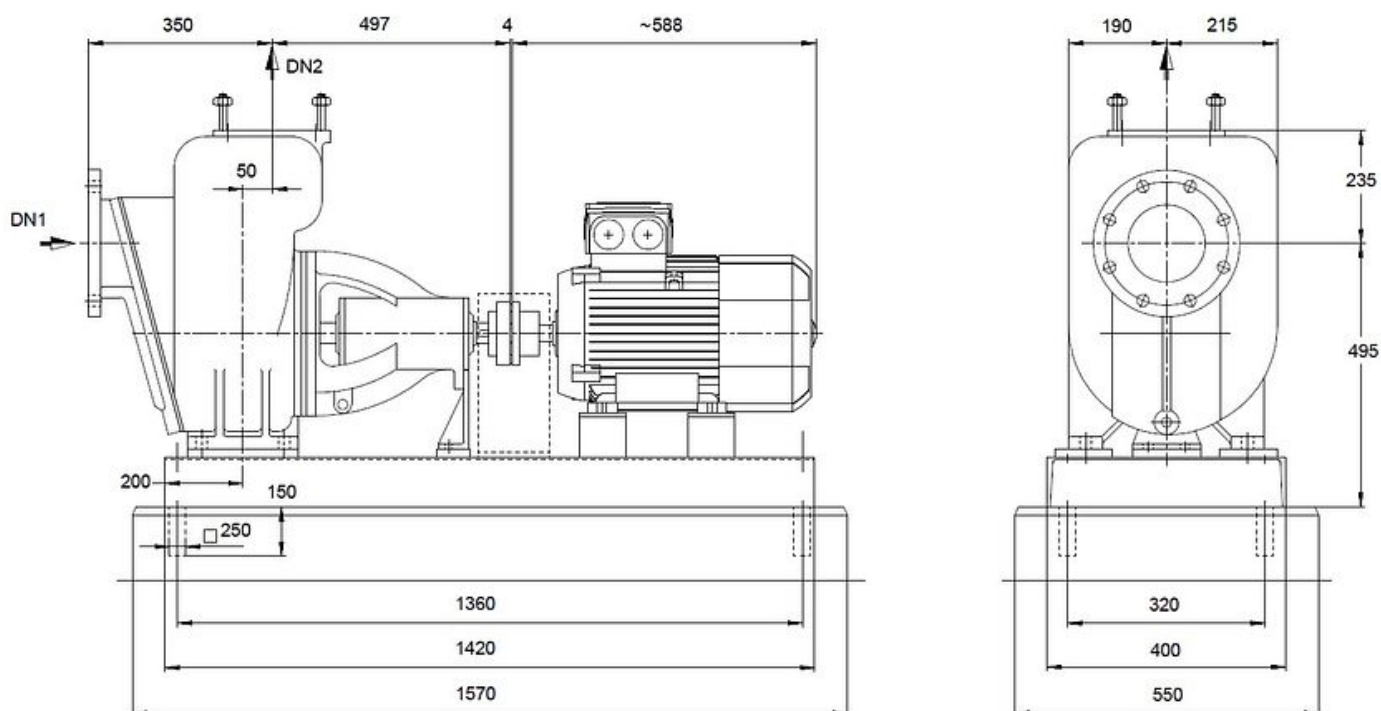
Trial in presence of the crew as soon as the vessel is afloat

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Handling of old and new pumps		Per unit	1.0
80m3/h replacement		Per unit	1.0
Piping adjustment		Per unit	1.0
Electrical disconnection/connection		Per unit	1.0

Images:



To be executed by: Yard

Description:

ITUR pump Type: RWV - 80 / 250 350 Kg with motor

Serial number: 5113766

Supplies by GENAVIR

-Dismantling of suction and discharge flanges/sleeves and various accessories. Checking the internal condition of the flanges/sleeves. Replace gaskets.

-Uncoupling the pump and electric motor, checking the coupling fingers and replacing if necessary.

-Bearing drain.

-Pump removed.

Complete inspection of the pump in the workshop (with on-board and off-board handling).

-Checking the pump body and components. Measurement of clearances and dimensional checks (technical report).

-Replacement of bearings, seals, wear parts, seals or braids.

-Complete cleaning, reassembly, refitting of the pump, coupling with the electric motor and alignment in accordance with ITUR recommendations.

Re-oil the bearing.

-Test, check pressures, correct rotation without hard points, absence of noise.

-Checking the alignment and reworking if necessary.

-Careful cleaning of the site after testing (in connection with the pump work).

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Complete inspection of the pump in the workshop		Per unit	1.0

To be executed by: Yard

Description:

ITUR pump Type: IL 200 / 350 550 Kg with motor

Serial number: 5366224

Supplies by GENAVIR

-disassembly of flanges, coupling guard and various accessories...

-Uncoupling the pump and electric motor. Check coupling fingers and replace if necessary. Removal of the suspension studs (the electric motor will be removed by the electrician, see below).

-Complete removal of the pump.

-Complete inspection of the pump in the workshop (including handling the pump on board/on the ground and vice versa).

-Checks on the pump body and components. Measurement of clearances and dimensional checks (technical report).

-Replacement of bearings, seals, wear parts, seals.

-Complete cleaning, reassembly (pay attention to the direction of the deflector rep 35), reassembly of the pump, coupling with the electric motor.

Pump priming (essential before start-up test).

-Test, check pressures, correct rotation without hard points, absence of noise.

-Thorough cleaning of the site after testing (in connection with the pump work).

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Complete inspection of the pump in the workshop		Per unit	1.0

List of attachments:

1) 7_10_1-Notice d'Installation -Entretien_Type Pompe ILCS.PDF, 312 KB

2) 7_2_1-Notice d'Installation -Entretien_Type Pompe IL.PDF, 191 KB

3) 7_3_1-Notice d'Installation -Entretien_Type Pompe ILS.PDF, 405 KB

To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

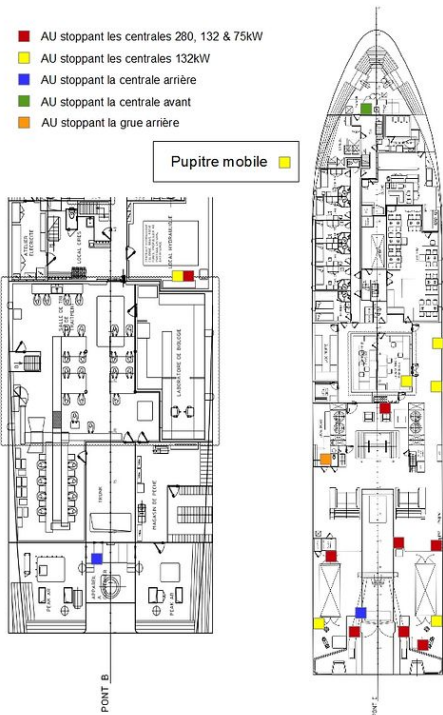
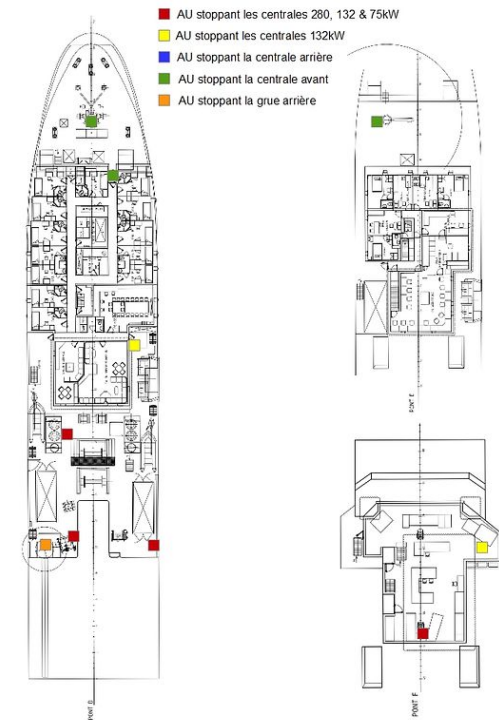
Name	Description	Quote type	Quantity
general		Per unit	1.0

List of attachments:

- 1) AC 9 (1-2)_B - Disposition des Appareux Pont C Version Pêche.pdf, 10.1 MB
- 2) AC 9 (2-2)_B - Disposition des Appareux Pont C Version Océanographique.pdf, 7.76 MB
- 3) TU 380_H - Schéma Hydraulique (Tel que Construit).pdf, 1.93 MB
- 4) TU 382_I - Schéma Hydraulique - Equipements Auxiliaires pour la Pêche.pdf, 2.65 MB
- 5) TU 383-1_E - Schéma Hydraulique - Equipements Auxiliaires pour la Pêche.pdf, 1.17 MB
- 6) TU 383-1_E - Schéma Hydraulique (uniquement treuil 10T ALM).pdf, 1.79 MB
- 7) TU 383_H - Schéma Hydraulique - Equipements Auxiliaires pour la Pêche.pdf, 9.45 MB
- 8) TU 384_I - Schéma Hydraulique - Treuils de Funes et Propulseur Transversal AR.pdf, 13.5 MB
- 9) TU 385_A - Portique Thalassa 1re Extension Plan d'Ensemble.pdf, 272 KB

Images:

(Images start on next page)



To be included: Crane or lifting

To be executed by: Yard, Specialist

Surveyed by: Class

Material supply by: Owner

Description:

Crane lifting cylinder renewal (OWNER SUPPLY):

- Stem replacement
- Cylinder replacement
- Seals renewal

Topping lift cylinder overhaul (OWNER SUPPLY)

- Seals renewal

EFFER 12000-2S crane, 1.25T at 8.63 mt

- Positioning the crane for dismantling
- Shafts removed
- Plugging the circuit with steel plugs
- Handling by land crane
- Open the cylinders
- Drain oil
- Reassemble the cylinders with new parts
- Fit the seals and new parts supplied by the owner
- Pressure test on test bench: Leak test pressure 200 bar with BV inspector
- Loading handling by land crane.
- Replacement of pins if any anomalies are found
- Roofing of clevises
- Greasing
- Hydraulic hoses reconnected.
- Reassembly of axles.
- Dynamic testing of the crane and its safety devices with BV inspector

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

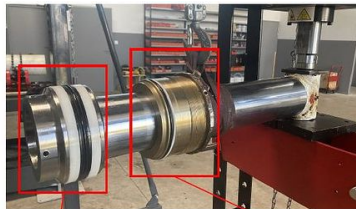
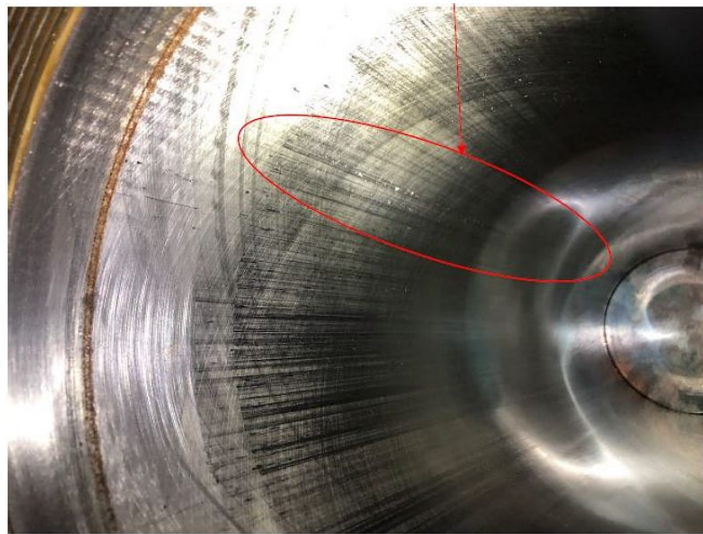
Name	Description	Quote type	Quantity
Crane lifting cylinder renewal		Per unit	1.0
Topping lift cylinder overhaul		Per unit	1.0

List of attachments:

- 1) Plan41-200dpi.pdf, 89.9 KB
- 2) Plan41.pdf, 4.81 MB
- 3) Plan43-200dpi.pdf, 81.6 KB
- 4) Plan43.pdf, 4.54 MB
- 5) Plan44-200dpi.pdf, 107 KB
- 6) Plan44.pdf, 5.11 MB

Images:

(Images start on next page)



To be included: Corrosion protection, Crane or lifting

To be executed by: Yard, Specialist, Crew

Material supply by: Owner

Description:

The electric cable will be removed by GENAVIR crew at the vessel arrival and the new cable shall be fitted before vessel departure. The shipyard may include 2 days for removal and 3 days for refitting in its schedule. An area sufficient for cable pulling devices must be maintained during this period on the quay side.

- Remove hydraulic motor VOAC F11 - 150 - MFSNS (The dismantled motor will be return to the crew, but replaced by a newer motor - genavir supply)
- Present the new F 12-150 MF-SV-S-000-0000-00 hydraulic motor supplied by the owner and adapt the piping.
- Remove the CTD winch from the lateral frame
- Handling to workshop
- Dismantle all the winch components.
- Sandblast all parts in paint workshop
- Winch flanges have to be rebilded with resin coumpound and machined to the original dimension, with a flatness tolerance of 0,1 mm.
- Replacing the screws and bolts with shipyard supplies.
- Reassemble the winch
- Re-install the winch on board after painting
- Refit the new hydraulic motor

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
CTD winch complete overhaul in workshop		Per unit	1.0
Cable work assistance		Per unit	1.0
hydraulic motor replacement & adaptations		Per unit	1.0

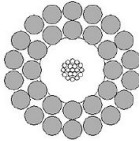
List of attachments:

- 1) CH18-Plans d'Execution_Treuil Bathysonde_Treuil de Funes.PDF, 8.73 MB
- 2) CH20-Nomenclature Générale - Portique Latéral.pdf, 3.09 MB
- 3) CH20-Plan-Ensemble_Portique Lateral-94-214-PF-PL-100-B.pdf, 16 MB
- 4) CH20-Plan-Ensemble_Portique Lateral-94-214-PF-PL-100.pdf, 779 KB
- 5) CH20-Plan-Renforcement Portique Tribord-08-149-01_A.pdf, 212 KB
- 6) CH20-Plan-Renforcement Portique Tribord-Details-08-149-02_Abis.pdf, 115 KB
- 7) CH20-Plan-Renforcement Portique Tribord-Details-08-149-02_A.pdf, 133 KB
- 8) CH20-Travaux de Renforcement du Portique Latéral.pdf, 11.8 MB

Images:

(Images start on next page)



1 -42 P			
Single conductor armored cable, designed and specially manufactured for use in well logging. The armor wires are high tensile, galvanized improved plain steel, performed and prestressed. The armor could be coated with an anti corrosion compound.			
			
14 AWG copper	16	0.014"	19/ 0.36 mm
EPC insulation			
Compressed diameter	0.191"		4.85 mm
Inner armor	12	0.059"	12/1.500 mm
Outer armor	18	0.059"	18/1.500 mm
Nominal diameter	0.427"		10.83 mm
Nominal Properties			
ELECTRICAL			
Minimum D.C. resistance at 68°F or 20°C	14 AWG cond.	29 Ω/Km	9.5 Ω/Km
	Armor	11 Ω/Km	3.7 Ω/Km
Minimum insulation resistance at 500 Vdc	14 AWG cond. armor	50000 MΩ/Km	15000 MΩ/Km
Capacitance (at 60 Hz) at 182mm	14 AWG cond.	35 pF/ft	115 pF/m
Voltage rating	14 AWG cond. Armor	2000 Vrms	2000 Vrms
MECHANICAL			
Calculated weight	in air	324 Lbs/Km	482 Kg/Km
	in water (sp=1.026)	248 Lbs/Km	388 Kg/Km
Temperature rating (recommended for use hours)	min	-50 °F	-50 °C
	max	180 °F	150 °C
Minimum Breaking Strength	Each strand	13870 Lbs	8960 dAN
	Each free	13900 Lbs	1920 dAN
Diameter tolerances	at 60Hz	40/10 mm	
Recommended minimum static diameter of curvature	on reel	12 ft	3.15 mm
Recommended minimum dynamic diameter of curvature	on sheave	23.36 "	5.82 mm
Nominal estimated torque			0.87 m.daN

NRH THALASSA		Câble bathysonde		N° commande : AT/T/912 /64573	
Caractéristiques du câble					
<u>Description :</u>		<u>Caractéristiques mécaniques :</u>			
Type 1-42-P monoconducteur.		Longueur : 8080 m			
Conducteur : 19 fils diam=0,36mm en cuivre .		Poids dans l'air = 482 Kg/Km			
Diamètre isolation comprise = 4,85mm		Poids dans l'eau = 398 Kg/Km			
armature en acier galvanisé.		Charge de rupture extrémités fixées =8040 daN			
1ère couche 12 fils diam=1,5mm		Charge de rupture extrémités libres =5920 daN			
acier galvanisé diam extér. =7,85mm		diam. extérieur = 10,85 mm moyenne			
2ème couche 18 fils diam=1,5mm					
acier galvanisé diam extér. =10,85mm		<u>Caractéristiques électriques :</u>			
Tolérance 10,78 à 10,85		Résist. du conducteur = 9,5 ohms/Km			
		Résist. de l'armature = 3,7 ohms/Km			
		Isolement à 500V = 15000 Mohms/Km			
RESTE : 5998m 02/2025		Capacité à 1Khz armature/conducteur 115pFarads/m			

To be executed by: Yard

Surveyed by: Class, Specialist, Owner's representative

Material supply by: Owner

Description:

GENERAL DESCRIPTION

- A lifting plan shall be prepared by the yard and provided to the owner for approval.
- Removal/refitting and disconnection/connection of cables and hydraulic hoses to enable the Aframe to be removed/reinstalled. Hoses and hydraulic connections shall be properly plugged for the duration of the works.
- Install the support/safety structure and legs to dismantle the Aframe jacks and axles*.
- Dismantle the jacks
- Dismantle the axles
- Remove the Aframe and store it in a protected area to allow the remaining cables and hose routing to be dismantled.
- After servicing the hydraulic cylinder_After Painting works on the AFrame_After Damaged cables replacement and hose passages renewal if necessary
- Reassembly everything in reverse order

IMPORTANT

- Details and quotation on piping works C.005 and C.006
- Details and quotation on steel works D.004

Dismantling_Remounting_Securing_Handling 14 250 KG without cylinders

The ship repair yard will:

- Assemble the Aframe support structure,
- slinging and handling onshore/offshore, offshore/onshore
- remove and dismantle it after working on the hydraulic jacks and others repairs.
- Safety spot welding of the structure to the fishing ramp bulwarks.

AR frame support structure:

This structure will be supplied by GENAVIR in spare parts (with bolts). The composition of the structure is an horizontal beam 4400 mm long in H section 300x300 fitted at the ends with 2 fixing plates each comprising 8 holes diam.34 for fixing to the top of the Aframe and 4 plates with 4 holes diam.18 for fixing the legs and the legs described above:

220x110 IPN legs (4):

2 legs 6500 mm long with a plate at the top end (4 holes diam. 18) , the bottom part is a wide plate with an IPN 1000 approximately with a plate with 4 holes diam 18 for fixing to the ship structure.

2 legs, 5300 mm long, with a 4-hole plate at the top (diam. 18), the bottom part is a wide plate.

Aft Aframe complete Overhaul///Hydraulic cylinders

1st and 2nd extension cylinders (4 cylinders)

Removal and inspection of the 4 cylinders in the workshop (with on-board/workshop handling).

- Sealing with steel plugs of the connections left free on board the ship.
- Replacement of seals and gaskets - supplied by GENAVIR
- Visual and dimensional checks of pins, clevises and joint bushes.
- Drying of pins and bushes.
- Replacement of ball joints and seals - supplied by GENAVIR
- Replacement of second extension rods. We would be grateful if the ship repair yard could quote a price for the supply of these rods. Depending on the quote, GENAVIR will decide whether to supply them itself or take up the ship repair yard's offer.
- reassembly, hydraulic test in the workshop in the presence of the BV.
- Check hoses and replace if necessary.
- Flushing hydraulic circuit
- Refitting cylinders on board the vessel.

- Aframe testing in the presence of the BV.

Aft Aframe complete Overhaul/// Legs

- Removal of the 2 gantry foot pins and the 2 connecting rods (uncoupled on the 1st extension cylinder rods side).
- Checking the dimensions of the pins, clevises and joint bushes of the gantry foot assembly. Penetrant testing of pins and bushes.
- Replacement of ball joints, seals and gaskets. GENAVIR supply
- Check that the grease channels in the pins and bushes are not blocked.
- Reassembly of the various components after pre-greasing the various pins and bushes.

Aframe passage deck Piping CF.C.005

-Removal of the geaquello+flammar deck seal

-Removal of SAE flanges above and below deck (if too difficult to access below deck, use a more efficient method such as cutting and welding).

NB: The ship repair yard is responsible for recovering any oil remaining in the hoses.

-Removal of roxtec-type seals (**other model in place, perhaps not adaptable with roxtec, so keep the old ones**).

-Replacement of the 14 sections of HP hydraulic tubes passing through the deck with stainless steel tubes according to the nomenclature supplied in the appendix.

NB: Hydraulic pipes to be replaced are listed below:

- T75, T74, T42, T41
- T72, T71, T61, T60, T56, T55 (starboard)
- T72, T71, T62, T57 (portside)

-Replace deck seals

-Cleaning and fitting of geaquello + flammar supplied on site

-Pressure tightness tests

Aframe corrodes piping replacement CF.C.006

All pipes showing signs of corrosion will be replaced

When the Aframe is laid, the superintendent and the ship repair yard's works manager will go out to inspect the equipment to agree on the scope of work required.

Please give an estimate quotation for 8 meters of DN50 HP piping replacement.

Aframe steel works CF.D.004

An inspection will be carried out with the superintendent once the Aframe has been removed to confirm the exact scope, but for tenders:

Following items shall be quoted :

- Removal of unused supports and accessories as shown in the photo 'D.004 on both sides remove '.
- Removal and replacement of corroded pipe supports as shown in photo 'D.004 pipes supports and clamps '.
- (shipyard supplies)
- Removal and supply of plugs and sockets with identical fittings (shipyard supplies)
- Replacement of damaged stainless steel cable trays

Aframe painting job CF.F.011

A-frame without fittings:

Surface area: 60 m2

100% Degreasing and HP washing

- Paint as per International specification

Nota Bene : Side winch CMU 10T

- Power tooling ST3
- Paint treatment as per international specifications
- Replacement of screws supplied by yard

Aft Aframe complete Overhaul///BV tests

Assistance with the static and dynamic tests in the presence of Bureau Veritas. The crew will be limited to handling the Aframe.

SWL Aframe = 10 t

- dynamic test at 1.1 x CMU = 11 T
- static test at 1.25 x CMU = 12.5 T

Provision and handling/slinging of a split test load (10 t, 100 kg, 150 kg) fitted with a lifting sling (Aframe sling supplied) including transport and handling on board/on land.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

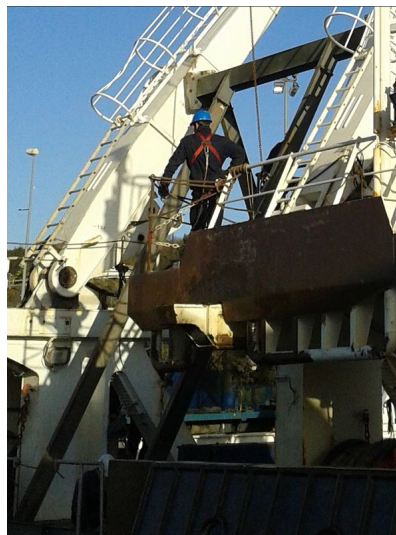
Name	Description	Quote type	Quantity
Dismantling_Remounting_Securing_Handling 14 250 KG without cylinders		Per unit	1.0
Hydraulic cylinders		Per unit	1.0
Legs overhaul		Per unit	1.0
BV tests		Per unit	1.0
CF.C.005_ passage deck piping		Per unit	1.0
CF.C.006_Corroded pipes replacement		Per unit	1.0
CF.D.004_Steel works		Per unit	1.0
CF.F.011 Complete painting renewal		Per unit	1.0

List of attachments:

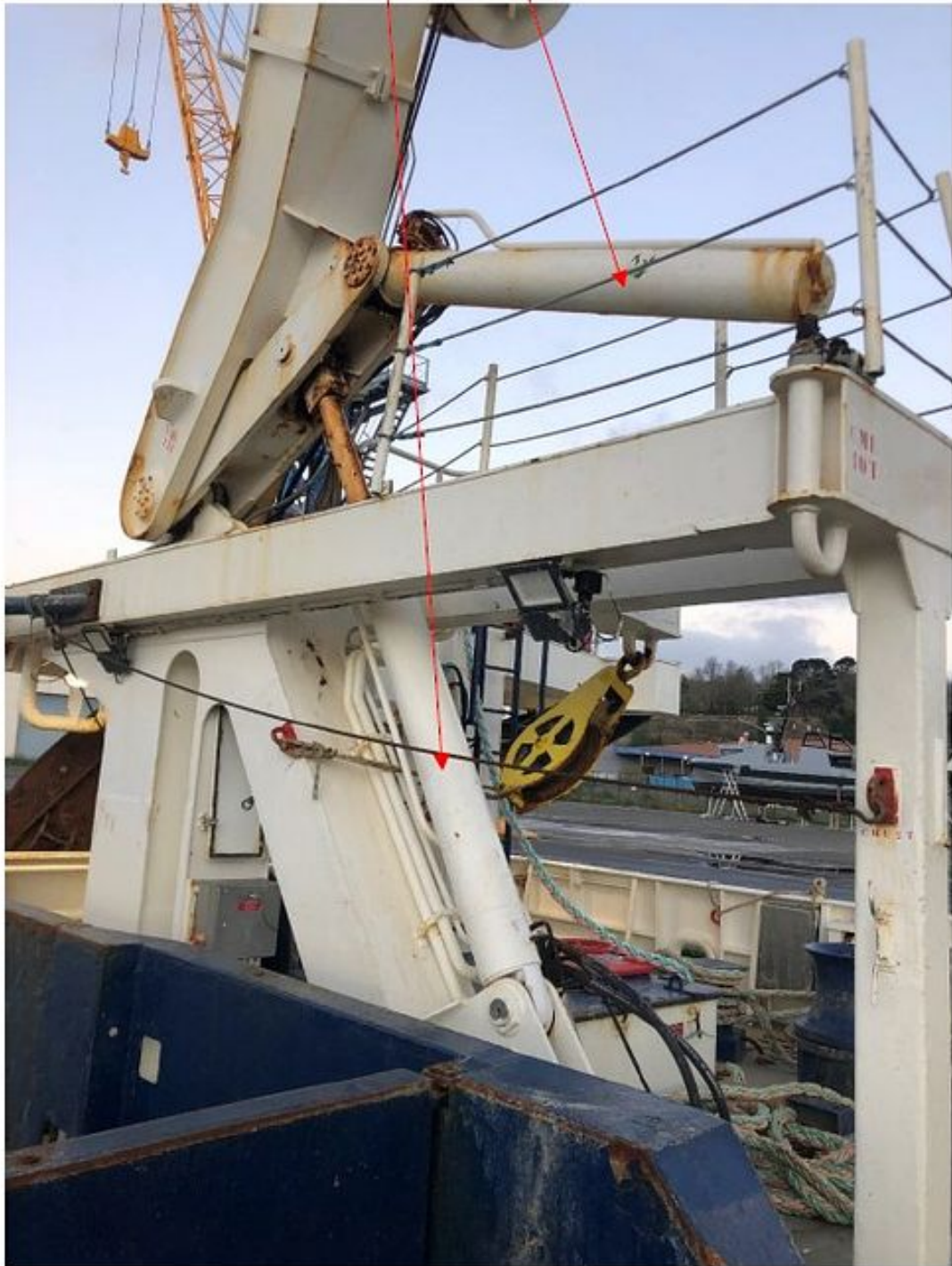
- 1) 15_1_2-Portique Arriere-Specifications Generales-Plan Qualite.pdf, 8.66 MB
- 2) 15_1-Portique Arriere-Specifications Generales.PDF, 8.95 MB
- 3) 15_2-Portique Arriere-Manuel Operateur.PDF, 302 KB
- 4) 15_3-Portique Arriere-Manuel d'Entretien.PDF, 304 KB
- 5) 15_4-Portique Arriere-Fiches Techniques des Fabricants.PDF, 4.07 MB
- 6) 15_6-Portique Arriere-Divers.PDF, 7.68 MB
- 7) CH15-Nomenclature Pieces Commerce-Tuyauteries Plan N°383 N 700.PDF, 219 KB
- 8) CH15-Plan 2_2-Portique S_E Verin N°1-383 P 200_B.pdf, 339 KB

Images:

(Images start on next page)



- Vérin seconde extension : 200 x 85 x 2075
- Vérin première extension : 200 x 90 x 1940.



To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Owner

Description:

- Removal of winches for corrosion treatment.
- Replacement of screws and bolts.
- Replacement of hydraulic cartridges.
- Replacement of YV10 electrovalve
- Replacement of hydraulic accumulator
- Reposition the winches after painting
- Replacement of textile and steel cables
- Functional tests in the presence of the owner

Spareparts will be supplied by GENAVIR

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Textile winch works		Per unit	1.0
Steel cable winch works		Per unit	1.0
CF.F.012_Heila cable winches painting job		Per unit	2.0

List of attachments:

- 1) 160803-L-0198-Ing.pdf, 337 KB
- 2) 2585_Boom rest frame.pdf, 65.5 KB
- 3) 655.15.001.10-R03 avec verrouillage.pdf, 910 KB
- 4) 6551600100CB1.pdf, 3.49 MB
- 5) 6551600101_R02.pdf, 834 KB
- 6) grue heila.pdf, 39.1 MB
- 7) Implantation grue Heila.pdf, 396 KB
- 8) load diagram main winch.pdf, 170 KB
- 9) Plan elec 6551600101CB1.pdf, 817 KB
- 10) plan elec 6551600101_R02.pdf, 834 KB
- 11) Plan elec et rechange 6551600100CB1.pdf, 3.49 MB
- 12) plans electriques.pdf, 3.49 MB
- 13) Prj2585 Boom rest.pdf, 875 KB
- 14) PRJ 2585_HC16723 BV_BOOM REST.pdf, 471 KB
- 15) PRJ 2585_HC16723 BV_GA.pdf, 1.16 MB
- 16) PRJ 2585_HC16723 BV_Splitted weight.pdf, 156 KB
- 17) Schemas electrique 16L0198-E-AGG-DEL-28032017.pdf, 289 KB
- 18) Schemas electrique 16L0198-E.PDF, 274 KB
- 19) Spare parts HEILA.pdf, 5.08 MB
- 20) TMA-0753GEN16_A (1).pdf, 702 KB
- 21) TMA-BV 0013-GEN-17.pdf, 31.2 KB
- 22) TMA-BV 0813-GEN-16.pdf, 31.8 KB
- 23) TMA-BV TEST REPORT WINCH TMS 4-60K-3-F36-DE.pdf, 75.9 KB
- 24) TMA-BV TEST REPORT WINCH TMV 7-110V-3R-FS28-DE.pdf, 76.1 KB

To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Yard, Owner

Description:

The adaptation work consists of:

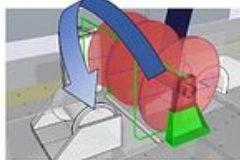
- Possible reinforcement of the vessel's structure
- Installing new M30 fountains (6) supplied by Genavir in accordance with the plan supplied by a design office in the appendix.
- Details drawings are not available yet and will be provided in the next revision prior to the visit onboard.

List of attachments:

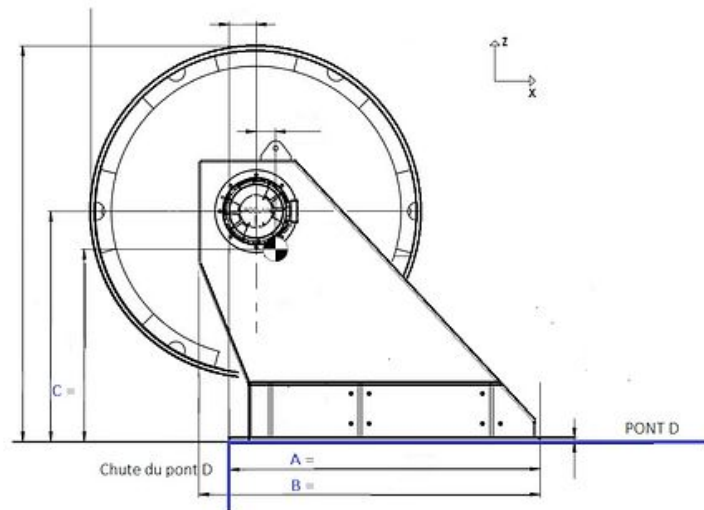
1) AC 9-8_H Implantation des Fontaines Ponts C D et E.pdf, 6.69 MB

Images:

⇒ L'intégration de l'enrouleur double doit se faire au pont D au même emplacement que l'ancien. Néanmoins il est primordial de trouver une solution pour que les engins déployés tombent directement sur le pont C.

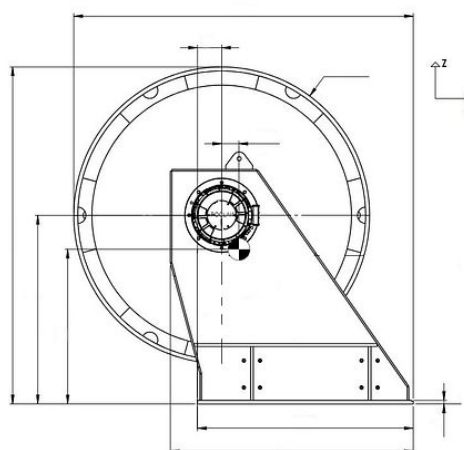


- Soit l'installation du nouvel enrouleur est décalée de la distance nécessaire vers l'arrière du navire.
- Soit le berceau du nouvel enrouleur est construit en diagonal pour assurer la chute directe de l'engin de pêche sur le pont C.

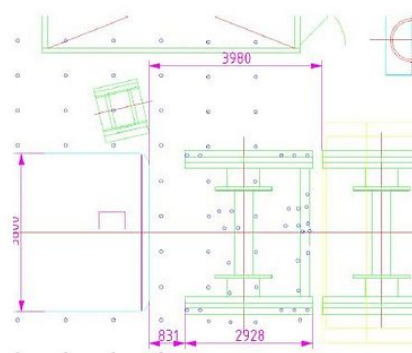
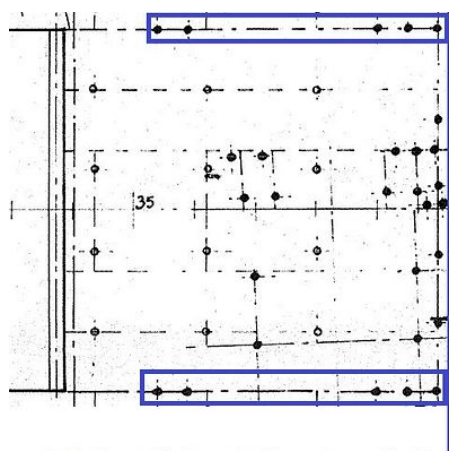


DNO-STN A.Samzun
Projet Enrouleur double à chaise décalée
N/O THALASSA





DNO-STN A.Samzun
Projet Enrouleur double à chaise décalée
N/O THALASSA



Fontaines utilisées actuellement pour fixation enrouleur pélagique pont D

D'après le plan AC 9-8 Leroux et Lotz Implantation des fontaines Pont C, D, E. Pour les détails fontaines plan partiel



To be executed by: Yard

Description:

trawl winder heavily corroded

- Quote for all access and handling
- Removal and securing of the hydraulics. Fitting blanking plugs.
- Remove drum and reel flanges.
- Send these components to the sheet metal and paint workshops.
- Reinstalled on board after restoration work
- Replacement of all screws and bolts with new ones identical (shipyard supplies).
- Reconnecting the hydraulics
- Tests in the presence of the crew during the week of sea trials.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Ground Trawl net winder OVERHAUL		Per unit	1.0
CF.F.010_Ground Furling System complete treatment		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Surveyed by: Class, Owner's representative

Description:

Oil Drain

Gearbox visual inspection and gears teeth control with blue path

Brakes clearance and thickness check

Trial at sea

Supplies by GENAVIR

Complete inspection of the windlass

- Removal of port and starboard shafts, sprockets and spud clutches
- Cleaning of dismantled parts
- Check and record port and starboard clearances between shaft and sprockets, and shaft and sprockets, check shaft frets and sprocket bushes
- If necessary, re-cut the chamfers on the tops of the sprocket teeth.

Gearbox section

- complete inspection of gearbox, after draining
- visual inspection, measurements, clearances between shafts and gears
- replace seals, sealing rings and bearings
- reassembly, oil filling
- Reassembly of the assembly after work, greasing and testing

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Complete inspection of the windlass		Per unit	1.0
Gearbox section		Per unit	1.0

List of attachments:

- 1) AC 2-1_F - Implantation du Guindeau - Puits au Chaines.pdf, 5.95 MB
- 2) CH19-Manettes de freins de guindeau.pdf, 71.3 KB
- 3) CH19-Note - Mailles Kenter sur lignes de mouillage.pdf, 585 KB
- 4) CH19-Plan-Arbre de Guideau-94_214_PF_GU-127.pdf, 1.13 MB
- 5) CH19-Plan-Arbre de Guideau-94_214_PF_GU-129.pdf, 338 KB
- 6) CH19-Plan-Baladeur Crabot du Barbotin-94_214_PF_GU-120.pdf, 158 KB
- 7) CH19-Plan-Bande de Frein-94_214_PF_GU-111_A.pdf, 2.17 MB
- 8) CH19-Plan d'Execution_01-Guindeau Hydraulique-PLANS.pdf, 1.61 MB

To be executed by: Yard

Surveyed by: Class

Material supply by: Owner

Description:

The hydraulic accumulators to be replaced are listed below:

Watertight doors(5)

Power unit 75, 132, 280 KW (6)

Standard replacement

Must be validated by BV surveyor

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Standard replacement of 11 hydraulic accumulators		Per unit	1.0

List of attachments:

1) Suivi Accumulateurs.xlsx, 10.2 KB

To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Yard, Owner

Description:

- Replacement of cylinder rods and ball joints supplied by GENAVIR.
- Replacement of seals supplied by GENAVIR
- Replacement of internal travel sensors
- 100 bars push test
- Retirement test at 30 bar
- Functional check of sensors in workshop
- Tests on opening and closing of covers on the vessel

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Visit of the cylinders of LENS-SHAPE (2)		Per unit	2.0
Dismantling_Remounting_Securing_Handling		Per unit	2.0

List of attachments:

1) CH05_bis-Cde N°11 541_620-380_A.PDF, 599 KB

Images:

(Images start on next page)



To be included: Provide reports

To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Owner

Description:

Maker : Winel

- Hydraulic cylinders overhaul in workshop
- Supplies by GENAVIR
- Pressure test for each cylinder: 200 bars - report to be provided

Provisions storage cylinder

Machine gangway jack

Sports hall cylinder

Fishing laboratory cylinder

- Test of watertight doors with the crew after reassembling

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Watertight door hydraulic cylinders overhaul		Per unit	4.0

Images:



To be included: Provide reports

To be executed by: Yard

Surveyed by: Class

Description:

Launch air cylinders (6) :

SCO launch air cylinders Volume: 125 litres
Test pressure: 45 bars Service pressure: 30 bars
BD AR cylinder: No.: 95 127 Test date: 29/12/2000
Mil AR bottle: N°: 95 126 Test date: 29/12/2000
Td AR bottle: No.: Y.378 Test date: 29/12/2000
Bottle Bd AV: N°: Y.380 Test date: 29/12/2000
Front Mil bottle: N°: Y.377 Test date: 29/12/2000
Front Td bottle: No.: Y.379 Test date: 29/12/2000

Compressed air bottle 7b 500 liters (1):

SCO launch air cylinders Volume: 500 litres
Test pressure: 10 bars Service pressure: 7 bars

- Removal of all cylinder piping and accessories (inlet, outlet, vent, etc.).
- Removal of cylinder head and foot plates.
- Removal of the safety valve on each cylinder.
- Complete inspection of all cylinder valves, replacement of defective parts and seals.
- Internal inspection of cylinders and cleaning.
- Cylinder test (provide test pump and necessary connection/obturation fittings) (45 bar or 10 bar) in the presence of the BV and BV test certificate.
- All safety valves will be replaced with new ones supplied by GENAVIR.**
- Reconnect the cylinders to the air circuit. Check that there are no leaks (thousand bubbles).
- Careful cleaning of the site after testing (in connection with the cylinder work).

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Launch air cylinders		Per unit	6.0
Reservoir 7b 500 liters		Per unit	1.0

To be executed by: Yard, Specialist

Surveyed by: Specialist, Owner's representative

Material supply by: Owner

Description:

- Identification and stripping of all connections.
- Brushing and stripping of hydraulic block.
- General Cleaning of components.
- Removal of old distribution and control components.

Particular attention will be paid to protecting all oil openings, which will have to be systematically plugged by a suitable means in order to avoid any pollution of the circuit.

- Replacement of the most damaged valve and control components and fittings. **Supply GENAVIR except HP connexions**
- Testing and adjustment of the valves as recommended in the hydraulic plan in the presence of the hydraulic specialist directly employed by GENAVIR but with the help of the shipyard and in the presence of the chief engineer before the sea trials.

The ship's crew will be responsible for painting the components and applying grease tape once the equipment has been validated.

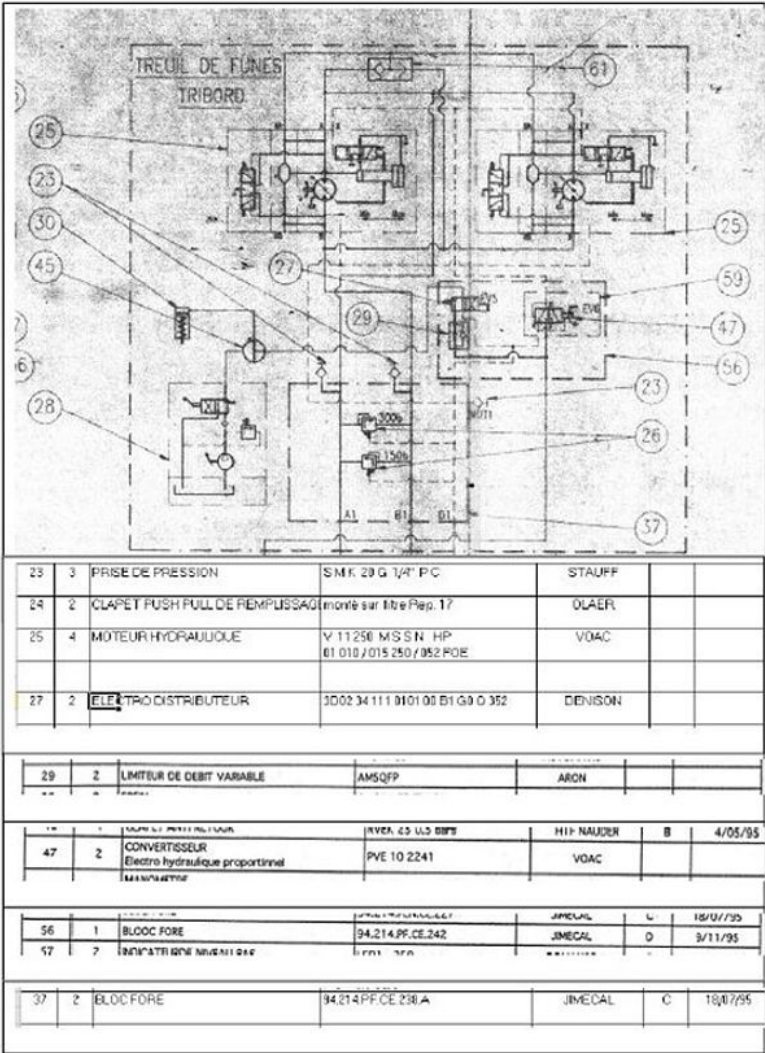
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fishing winches valves blocs visit		Per unit	2.0

Images:

(Images start on next page)



To be executed by: Yard

Surveyed by: Owner's representative

Description:

Use of a desludging product to eliminate deposits in the various exchangers and pipes in the main cooling fresh water circuit (eau brute).

Large sediments have the appearance of black mud

The ship repair yard must propose a solution for flushing the entire circuit before draining it for the various technical stop operations.

ALPHA LAVAL refrigerants can be by-passed

- Circuit water volume : 3,8 m3
- Maximum pressure for this work : 4 bars
- Black steel piping
- Bronze heat exchangers
- Nitrile seals
- Flange seals

The ship repair yard must supply a heating module

The 300m3/h circulating pump can be used. Please note that ITEM A4.103 is the 2nd circulating pump of this circuit.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Cooling water circuit flushing		Per unit	1.0

List of attachments:

- 1) CE 30-1 - Collecteur Eau brute Local Groupe Frigo.pdf, 147 KB
- 2) MS 1_J - Schéma de Réfrigération Nomenclature.pdf, 19.4 MB
- 3) MS 1_J - Schéma de Réfrigération.pdf, 11.8 MB

To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Yard, Owner, Ship, Contractor

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

All works performed on or near scientific equipment or transducer shall be done with great care.

Owners representatives (ETO or SPDT) shall be advised before proceeding.

New vales provided by yard must be provided with a BV 3.2 certificate.

Rudder shall be turned (35 degrees port or starboard) prior shaft seal work.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

List of attachments:

- 1) 02-03-139-01_B - Plan de Positionnement Forme 1.pdf, 976 KB
- 2) 02-03-139-02_B - Coupes Transversales Forme 1.pdf, 356 KB
- 3) 02-03-139-03_B - Plan de Positionnement Forme 2.pdf, 984 KB
- 4) 02-03-139-04_B - Coupes Transversales Forme 2.pdf, 343 KB
- 5) 02-03-139-05_B - Plan de Positionnement Forme 3.pdf, 936 KB
- 6) 02-03-139-06_B - Coupes Transversales Forme 3.pdf, 327 KB
- 7) 02-03-139-07_B - Détail TINS au C49 et C59 Inclinaison de 12.5 degrés.pdf, 433 KB
- 8) 02-03-139-08_B - Détail TINS au C40 et C70 Inclinaison de 20 degrés.pdf, 330 KB
- 9) 02-03-139-09_B - Tirant de Tins Latéraux.pdf, 231 KB
- 10) 02-03-139-10_B - Plan d'Attinage des Tins Forme 1-2-3.pdf, 55.4 KB
- 11) 4_1_1-Palier Butee LAZ 280_1002-bis.pdf, 2.3 MB

- 12) 4_1_1-Palier Butee LAZ 280_1002.PDF, 2.56 MB
- 13) 4_2_1-Note Calcule Ligne D'Abres.PDF, 205 KB
- 14) 4_4_1-Helice Pas A Droite.PDF, 312 KB
- 15) 4_4_2-Helice Pas A Droite.PDF, 662 KB
- 16) 4_5_1-Instruction Manual.PDF, 15.3 MB
- 17) 810 ML 1(1-3)_C - Ensemble Ligne D Arbre Palier Moteur Lignage et Calage.pdf, 14.1 MB
- 18) 810 ML 1(2-3) - Montage Frein de Ligne d'Arbre.pdf, 11.3 MB
- 19) 810 ML 1(3-3)_A - Schéma Ligne de Propulsion.pdf, 4.71 MB
- 20) 810 ML 2_C - Ligne d'Arbre Tube Fourreau.pdf, 8.9 MB
- 21) 810 ML 4(1-2)_D - Démontage Rotor et Pitonnages.pdf, 12 MB
- 22) 810 ML 4(2-2)_A - Pitonnages Safran Hélice Arbre Porte-Hélice.pdf, 3.23 MB
- 23) AC 9-6_E - Echouage Nables de Coque.pdf, 3.27 MB
- 24) appendix_B_dry dock mechanical works.pdf, 31.9 MB
- 25) Arrêt Technique 2011 - Travaux de mise à Sec.pdf, 137 KB
- 26) Attinage C70 - Coupe Transversale.pdf, 2.11 MB
- 27) Attinage extrait du plan CE 20-10.pdf, 1.36 MB
- 28) C4_2_19-Lignage Rationnel Vibrations Laterales-Notice Propulsion-Rapport.PDF, 2.44 MB
- 29) CH04-Manuel Entretien Presse Etoupe-300AV_330AR_MK2-M.PDF, 1.23 MB
- 30) CH04-Plan-Accouplement Bride Coupling Flange-B002650002_D.pdf, 312 KB
- 31) CH04-Plan_AFT Sterntube Bearing-W004503290.pdf, 77.9 KB
- 32) CH04-Plan-Arbre PH PROP SHAFT-B001000014_C.pdf, 255 KB
- 33) CH04-Plan_Caiise Etancheite Avant 6L-B004850010_A.pdf, 57.2 KB
- 34) CH04-Plan_Caiise Etancheite Avant 6 Litres-W005400098_A.pdf, 44.3 KB
- 35) CH04-Plan_Coupling Bolt-B001500003_A.pdf, 49 KB
- 36) CH04-Plan-Ens Ligne D'Arbre-B002050013_B bis.pdf, 682 KB
- 37) CH04-Plan-Ens Ligne D'Arbre-B002050013_B.pdf, 899 KB
- 38) CH04-Plan-Ens Tube Etambot-B002500006_A bis.pdf, 471 KB
- 39) CH04-Plan-Ens Tube Etambot-B002500006_A.pdf, 722 KB
- 40) CH04-Plan_Forward Seal Assembly-W007095637_01.pdf, 72.6 KB
- 41) CH04-Plan_Forward Seal Assembly-W007095637_02.pdf, 73.5 KB
- 42) CH04-Plan_Forward Seal Assembly-W007095637_03.pdf, 70.4 KB
- 43) CH04-Plan-Forward Sterntube Bearing.pdf, 140 KB
- 44) CH04-Plan_LO System For Sterntube_FWD Seal ASSY-W008997077_B.pdf, 65.6 KB
- 45) CH04-Plan_Moyen Helice Propeller Boss-B001500014_01.pdf, 95.5 KB
- 46) CH04-Plan_Moyeu-1158F-2_5.pdf, 72.6 KB
- 47) CH04-Plan_Moyeu Helice Propeller Boss-B001500014_02.pdf, 96 KB
- 48) CH04-Plan_Moyeu Helice Propeller Boss-B001500014_03.pdf, 91.2 KB
- 49) CH04-Plan_Palier Arriere Tube D'Etambot-W0045003290.pdf, 78.8 KB
- 50) CH04-Plan_Palier Avant Tube D'Etambot-W0045003291_A.pdf, 74.6 KB
- 51) CM 9_C - Nable de Coque pour Capacités Combustible et Huile seulement.pdf, 86.3 KB
- 52) ED474-5900-01-0 Plan d'attinage.pdf, 352 KB
- 53) ED474-7300-01-PL 18_G - Ensemble compartiment machine.pdf, 1.59 MB
- 54) ED474-9300-TU14_I Schéma Ballastage.pdf, 5.53 MB
- 55) ED474-9500-PL38-L-PLAN DE SECURITE PROTECTION INCENDIE.pdf, 3.23 MB
- 56) ML 100 - Garde Cable à l'Hélice.pdf, 5.54 MB
- 57) ML 7(1-9)_D - Ensemble Etambot Ligne d'Arbre Etanchéité.pdf, 2.94 MB
- 58) ML 7(2-9)_B - Etambot Ligne d'Arbre.pdf, 3.3 MB
- 59) ML 7(3-9)_C - Arbre Porte-Hélice.pdf, 3.78 MB
- 60) ML 7(4-9)_D - Tourteaux Accouplement Ligne d'Arbre.pdf, 4.83 MB

- 61) ML 7(5-9) - Entretoise.pdf, 5.36 MB
- 62) MI 7(6-9) - Réservoir Huile Etambot.pdf, 1.97 MB
- 63) MI 8(1-2)_B - Vireur Ligne d'Arbre Ensemble.pdf, 13.3 MB
- 64) MI 8(2-2)_B - Vireur Ligne d'Arbre Détails.pdf, 16.1 MB
- 65) MT 7_K - Prises d'Eau Couples 58-60 Bd et Td Ensemble Détail.pdf, 5.67 MB
- 66) Photos Attinage fév 2017.pdf, 21.1 MB
- 67) Plan d'attinage en forme n°1 à Brest.pdf, 442 KB
- 68) Planning 2009 de Mise à sec en forme n° 1.pdf, 85.2 KB
- 69) Procédure d'Echouage_B.pdf, 133 KB
- 70) procédure montage hélice sans clavette _ 27112020-DOC271120.pdf, 347 KB

To be executed by: Yard

Surveyed by: Owner's representative

Material supply by: Yard, Owner

Description:

Anodes to be replaced will be defined by the superintendent when the vessel will be docked

-Anodes are of zinc welded type.

-New anodes are supply by the owner

-Paint touch-up around the pads after welding is included

-Access is included

The ship repair yard must give its price for the replacement of each type of anode:

- □replacement of a ZD 60 anode
- □replacement of a ZD 77 anode
- □replacement of a ZD 80 anode
- □replacement of a Z 51 anode
- □replacement of an anode Z 110

Inventory of all anodes :

Seawater traverse:

Port compartment: 2 x 8.5 kg ZD80 (Magduff) anodes

Starboard compartment: 2 x 8.5 kg ZD80 (Magduff) anodes

Port water intake :

4 x 8.5 kg ZD80 (Magduff) anodes

Starboard water intake :

4 x 8.5 kg ZD80 (Magduff) anodes

Fire engine hydrant :

2 x 8.5 kg ZD80 (Magduff) anodes

Transverse Front :

- Between tunnel welded to the hull and floating tunnel: 12 Coral Z51 anodes weighing 4.6 kg.

- Inside the tunnel: 5 Coral Z110 anodes weighing 10.5 kg.

- Inside of cover fairings :

- starboard: 2 ZD60 anodes

- Port: 2 ZD60 anodes

Transverse aft :

12 ZD80 (Magduff) anodes weighing 8.5 Kg.

Rudder :

15 anodes ZD80

Sounder bases :

Torque 84.5: weld an anode below the existing one in the sonar tube.

Torque 86: 2 ZD77 (Magduff) anodes weighing 1.9 kg.

Torque 88.5: 2 x 1.9 kg ZD77 (Magduff) anodes.

Torque 90.5: 2 x 1.9 kg ZD77 (Magduff) anodes.

Torque 94.5: 1 ZD77 (Magduff) anode weighing 1.9 kg.

Torque 100: 2 x 1.9 kg ZD77 (Magduff) anodes.

Torque 103.5: 2 x 1.9 kg ZD77 (Magduff) anodes.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
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replacement of a ZD 60 anode		Per unit	1.0
replacement of a ZD 77 anode		Per unit	1.0
replacement of a ZD 80 anode		Per unit	1.0
replacement of a Z 51 anode		Per unit	1.0
replacement of an anode Z 110		Per unit	1.0

To be executed by: Yard

Surveyed by: Class

Description:

Removal of the two water intake grilles on the sea water traverse.

Removal of the fire moto pump water intake grille.

-Opening including access if needed

-Clean and paint as per specification

-Refit and lock the bolts with stainless steel wire

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Grids for sea chests removal & refitting		Per unit	1.0

To be executed by: Yard

Surveyed by: Owner's representative

Description:

- Removal of rope guard
- Cleaning and paint inside and outside as per flat bottom specification
- Reweld after works
- Stagging included

Replacement of zincs inside the wire guard (same price as sacrificial anodes) if needed

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Ropeguard removal/refitting		Per unit	1.0

To be executed by: Yard

Surveyed by: Owner's representative

Description:

Work to be when the vessel is docked.

Clean manually all transducers with hot soapy water and sponge during the first day in dry dock and Flush with fresh water. 1 man during a half day

Install metal & wooden covers (owner supply) using wooden strips (yard supply) as per pictures below after template removal for work . 2 man during a half day

Paint or steel works are strictly prohibited in the dock when covers are not properly fitted.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Scientific transducers cleaning and protection		Per unit	1.0

To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Owner

Description:

- Removal/reinstallation of covers
- Checking the tread and fixing screws
- Remove/replace cover cylinders

Workshop visit of the cylinders see ITEM A5.101

Access with scaffolding must be quoted

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Lens shape gates of bow thruster removal/reinstall		Per unit	1.0

List of attachments:

- 1) AC 3-21 (1-2) - Trappe de Fermeture Tunnel Propulseur AV Epure Tunnel.pdf, 1.59 MB
- 2) AC 3-21 (2-2)_C - Trappe de Fermeture Tunnel Propulseur AV.pdf, 4.24 MB

Images:



To be executed by: Yard

Description:

Opening of 13 plugs

Closing at the end of the drydock + filler provided by yard

Vacuum test

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Opening/closing/test		Per unit	13.0

List of attachments:

1) AC 9-6_E - Echouage Nables de Coque.pdf, 3.27 MB

2) TU 60 - Nable de Coque pour Ballasts Eau douce Mer Puisards Cofferdams.pdf, 101 KB

To be executed by: Yard, Crew

Surveyed by: Class

Description:

- 2 Anchor of 1585 kg AC14 type
- 2 chain lines of 220 meters
- Chain links of 27.5 meters diameter 40
- Lower and range on drydock
- High pressure washing
- Chains calibration and report
- Repaint anchors and chain included in paintwork F
- Renew the marks on chain (done by crew)

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Lower and range on drydock		Per unit	1.0
High pressure washing		Per unit	1.0

List of attachments:

1) CH19-Thalassa - Puits aux chaines.pdf, 64.3 KB

To be executed by: Yard

Surveyed by: Class

Material supply by: Yard, Owner

Description:

Price shall be detailed in a table.

List of valves will be confirmed when the vessel will be docked

Valve's list attached is for quotation purpose only

Spare parts for butterfly valves are supply by GENAVIR

New valves if needed are supplied by the shiprepair yard with BV 3.2 certificate

Access works are included

OPTION 1:

- Removal of the valve
- Visit to workshop
- Cleaning
- Replace gland seals
- Pressure test 10b with BV surveyor
- Refitting

OPTION 2:

- Price of a new valve according to its dimensions with
- Dismantling
- Supplied with BV certificate
- Refitting

The site must give an overall price for the 25 non return valves (OPTION1 & OPTION 2) as well as a detail of the price according to their dimensions.

Starboard water intake box

- Water intake heater butterfly valve DN125 Qty :1
- Air release butterfly valve DN80 Qty :2
- Air blowing DN15 valve Qty :2
- Clean seawater intake DN50 butterfly valve Qty :1

Sea chest filters

- Air release butterfly valve DN20 Qty :2
- Draining butterfly valve DN20 Qty :2

Sea Chest

- Port air vent DN50 butterfly valve Qty :1
- Air release starboard butterfly valve DN50 Qty :1
- Suction for SW 200m3/h forward butterfly valve DN200 Qty :1
- SuctionSW 200m3/h AR butterfly valve DN200 Qty :1
- Suction SW 80m3/h AR butterfly valve DN200 Qty :1
- Port boiler suction DN50 butterfly valve Qty :1
- Suction boiler starboard butterfly valve DN50 Qty :1
- Sorting room wash pump suction butterfly valve DN100 Qty :1
- Ballast pump suction valve DN125 Qty :1
- Suction for osmosis pump butterfly valve DN125 Qty :1
- Suction fire pump starboard butterfly valve DN125 Qty :1
- Port fire-fighting suction unit DN125 butterfly valve Qty :1

Water intake box Motor-driven fire pump

- Fire motor pump suction butterfly valve DN125 Qty :1
- Air blowing DN15 valve Qty :1

Hull outlet on portside

- Dewatering chain well DN50 butterfly valve Qty :1
- Grease filter draining DN50 butterfly valve Qty :1
- EVAC station DN100 butterfly valve Qty:1
- Refrigeration seawater outlet DN250 butterfly valve Qty:1
- Dalotage hydrology lab butterfly valve DN200 Qty :1
- Drainage/ballasting discharge DN125 butterfly valve Qty :1
- Boiler discharge DN65 butterfly valve Qty :1
- Fuel oil water separator outlet DN32 butterfly valve :Qty 1
- Sump drain TD sorting room butterfly valve DN125 Qty :1
- Sorting room BD sump drain butterfly valve DN125 Qty :1
- Container refrigeration outlet DN65 butterfly valve Qty :1

Hull outlet on starboard side

- Refrigeration seawater outlet butterfly valve DN250 Qty :1

Miscellaneous valves

- Fire hydrant discharge TD butterfly valve DN100 Qty: 1
- Fire hydrant discharge BD butterfly valve DN100 Qty: 1
- Fire manifold insulation butterfly valve DN100 Qty: 1
- Fire rescue for washing unit butterfly valve DN100 Qty: 1
- Suction CUFES pump DN80 butterfly valve Qty: 1

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
DN 15 valve visit		Per unit	1.0
DN 32 valve visit		Per unit	1.0
DN 50 valve visit		Per unit	1.0
DN 65 valve visit		Per unit	1.0
DN 80 valve visit		Per unit	1.0
DN 100 valve visit		Per unit	1.0
DN 125 valve visit		Per unit	1.0
DN 200 valve visit		Per unit	1.0
DN 250 valve visit		Per unit	1.0
Supply and replacement of a DN 15 valve		Per unit	1.0
Supply and replacement of a DN 32 valve		Per unit	1.0
Supply and replacement of a DN 50 valve		Per unit	1.0
Supply and replacement of a DN 65 valve		Per unit	1.0
Supply and replacement of a DN 80 valve		Per unit	1.0
Supply and replacement of a DN 100 valve		Per unit	1.0
Supply and replacement of a DN 125 valve		Per unit	1.0

Supply and replacement of a DN 200 valve		Per unit	1.0
Supply and replacement of a DN 250 valve		Per unit	1.0

List of attachments:

1) B.301_SW Valves.docx, 12.8 KB

To be executed by: Yard

Surveyed by: Class

Material supply by: Yard

Description:

OPTION 1

- Removing the valve
- Cleaning, checking
- Replace flange gaskets (shipyard supply)
- Refitting

OPTION 2

In the event that the non return valve is out of order after being checked with the superintendent or chief engineer, the shipyard will replace it with a new one supplied by the shipyard.

- Boiler outlet DN65 Number: 2
- Boiler outlet DN80 Number : 1
- Pit chain outlet DN65 Number: 1
- Grease trap outlet DN65 Number: 1
- EVAC treatment plant outlet DN125 Number : 1
- Container cooling outlet DN80 Number: 1
- Fishing laboratory bilge outlet DN150 Number: 2
- Bilge/ballasting outlet DN150 Number: 1
- Hydrology scupper outlet DN250 Number: 1
- Seawater pumps outlet DN250 Number: 2
- Seawater pumps DN200 Number : 1
- Seawater, starboard side outlet DN300 Number : 1
- Seawater, port side outlet DN300 Number: 1
- EM/EB AV exchanger outlet DN150 Number: 1
- Exchanger outlet EM/EB AR DN150 Number: 1
- By pass emergency at hull outlet DN250 Number: 1
- Fire pumps Bd and Td outlets DN125 Number: 2
- Fishing laboratory washing pump outlet DN100 Number: 1
- Ballast pump outlet DN125 Number: 1
- Bilge pump outlet DN125 Number : 2
- Moto Firepump suction DN100: 1

The site must give an overall price for the 25 non return valves (OPTION1 & OPTION 2) as well as a detail of the price according to their dimensions.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
NRV DN 65 visit		Per unit	1.0
NRV DN 80 visit		Per unit	1.0
NRV DN 100 visit		Per unit	1.0
NRV DN 125 visit		Per unit	1.0
NRV DN 150 visit		Per unit	1.0
NRV DN 200 visit		Per unit	1.0
NRV DN 250 visit		Per unit	1.0

NRV DN 300 visit		Per unit	1.0
Supply and replacement of a DN 65 NRV		Per unit	1.0
Supply and replacement of a DN 80 NRV		Per unit	1.0
Supply and replacement of a DN 100 NRV		Per unit	1.0
Supply and replacement of a DN 125 NRV		Per unit	1.0
Supply and replacement of a DN 150 NRV		Per unit	1.0
Supply and replacement of a DN 200 NRV		Per unit	1.0
Supply and replacement of a DN 250 NRV		Per unit	1.0
Supply and replacement of a DN 300 NRV		Per unit	1.0

Images:

To be executed by: Yard

Description:
150 gram rudder leakage test

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
rudder leak test		Per unit	1.0

Images:



To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Yard, Owner, Ship

Description:

Complete overhaul

BECKER type S-C 2250 / 390 K1

Drawing N°1523 R-1.30702 a "assembly instructions"

Drawing N°1523 R-1.30704a "wick"

Drawing N°1523R-2 30703 "Jaumière"

Drawing N°1523R-4.30701: "rudder articulation system"

Drawing N°1523 R-2 30700 "rudder joint"

- Checks before and after the work:

-Check the clearance of the worm in its bearings, play at the exit of the worm.

-Check the clearance of the flap shaft in the rudder bearings (max. 2.5).

-Check the clearance of the flap pivot in its sleeve (max. 2.5)

- Remove the rudder and its flap
- Remove rudder stock

NB: Total weight rudder/rudder stock/rudder blade= 4500 kg +1804 Kg = 6300 kg

Follow Becker assembly/disassembly instructions

- it is essential to change the seals rep 2,3,4,6,8,9,21 in the assembly instructions drawing
- dimensional check of rings rep 2 and rep 3 drill plan
- imperative change of seals rep 8,10,11,12 and gasket rep 22 yellowing plan
- **check and replace guide shoes (item 2) rudder articulation system drawing**
- check bearings (items 2, 3, 4, wear ring item 9, support washer item 10, pressure ring item 7) rudder articulation diagram

Watertight pressure test B.400 and clearances report before and after works

Removal of any corrosion observed using Belzona 1311 resin (ceramic R metal) (following Becker instructions).

The areas corroded are under the wear rings rep 09 and the pressure rings rep 07 (rudder femelots). The wear rings and pressure rings must also be lined with Belzona resin after their wear was noted.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Access_dismounting_remounting_safety padlocks welding		Per unit	1.0
Handling to workshop/ to vessel after works		Per unit	1.0
reports		Per unit	1.0
Mechanical works_replacement		Per unit	1.0
Cleaning_surface preparation before painting as specification		Per unit	1.0

List of attachments:

1) 210 - AC-3-1_C - Montage Appareil à Gouverner - Montage Safran.pdf, 4.84 MB

2) Becker_Système_d_articulation_du_gouvernail.pdf, 26.5 MB

3) ML 4(2-2)_A - Pitonnages Safran Hélice Arbre Porte-Hélice.pdf, 3.23 MB

4) safran.pdf, 1.08 MB

5) safran.pdf, 1.07 MB

Images:

(Images start on next page)



To be executed by: Yard

Surveyed by: Specialist, Owner's representative

Material supply by: Yard, Owner

Description:

Complete overhaul under the shipyard's responsibility and assistance from a specialist

The supply of spare parts is part of the specialist's service.

These will need to be removed quickly and tested during the first few days in dry dock.

Because of the risk of spare parts shortages, 2 new pumps will be on board, which may have to be adapted.

-Removal of the pump unit.

-Handling on board/hydraulic workshop and vice versa.

-Checking the coupling and replacing if necessary.

-Remove the motor.

On-board tests.

Run the pump on a hydraulic bench or on site before dismantling: check operation at several pressures/flows, measure leakage rates at several P/I (readings and curves).

Possibly (depending on the results of the bench test or on-site checks)

-Complete inspection of the pump.

-Replacement of bearings, various seals and defective parts (list of parts to be replaced and reference of components/bearings to be supplied to us on completion of inspection after dismantling).

re-assembly and testing

Possibly

-crating of hydraulic pumps for shipment.

Possibly

-Replacement with a new pump

B5.2Cylinder

Removal of limit switch box

Remove control assembly, solenoid valves & spool valves.

Remove top cover.

Remove cylinder

Check chambers, cylinder and pistons.

Wear parts replaced (supplied by Génavir).

Reassemble cylinder, pistons, cover and accessories.

B5.3 installation

-Oil change.

-Clean magnetic filters.

Re-oil.

-Various purges before testing.

-tests

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Handling works		Per unit	1.0
Mechanical works		Per unit	1.0

To be executed by: Yard, Specialist

Surveyed by: Class, Specialist, Owner's representative

Material supply by: Yard, Owner, Contractor

Description:

Complete overhaul under the shipyard's responsibility and assistance from a specialist

The owner will contract a dedicated specialist.

The specialist will report directly to the owner.

Any change on the scope of works or in the specification that could be suggested by the specialist shall be confirmed by the owner.

The specialist is responsible for the shaft seals installation and integrity. Other works shall be performed as per its recommendation but under yard's responsibility.

PLAN LIPS B002050013 (SHAFT LINE ASSEMBLY)

(PLAN LIPS B002500006) STERN TUBE ASSEMBLY

Propeller shaft: length 10881 mm PLAN LIPS B001000014 (propeller shaft)

Shaft line draining and oil disposal by yard to be included in the offer (total 98 litres plus expansion tank volume if drained) Refilling is done by crew.

REAR SEAL AND FRAME

LIPS drawing W007090610

LIPS type 330 MK-M

-Drain the seals (collect an oil sample for analysis, bottle to be taken on board).

-Measure shaft sag using the LIPS method (see procedure).

-Fill / drain (oil supplied on board).

FRONT STERN SEAL

PLAN LIPS W007095637

LIPS type 300 MK-M

-Drain seals (collect oil sample for analysis, bottle to be taken on board).

-Measure shaft sag using the LIPS method (see procedure).

-Fill / drain (oil supplied on board).

PROPELLER SHAFT LINE

Shaft line weight: 4785kg

Record clearance and concentricity before overhaul.

Dismantling according to LIPS specifications

Coupling: see LIPS drawing B02650002 coupling flange plus shaft line assembly drawing B0020050013 (shaft line assembly)

Check fitting dimensions to LIPS specifications

After retracting the shaft line - dimensional check

The threads and cones will be inspected before the shaft is removed,

Propeller shaft line :

Removal of the shaft line

For removal, a counterweight must be provided to keep the propeller shaft parallel to the stern tube, to avoid damage to the probes and clamping cone.

Particular attention must be paid to protecting the conical bearings and threads.

Handling and transport to the workshop

Cleaning

Dimensional checks in the workshop

Checking the propeller fitting cone and threads

Refitting

Reassembly in accordance with LIPS specifications

On reassembly: Tolerance

Horizontal concentricity 0+/- 5/100 mm vertical-11+/- 5/100 mm

Parallelism 14/100 +/- 5/100

Record the new shaft clearance after assembly for reference.

STERN TUBE :

Check dimensions and alignment of the bearings (see LIPS drawings W004503290 and W004503291 for the stern and stern bearings respectively).

Replace bearings if necessary

Careful cleaning of the stern

Check the Memocal probes from the edge before reassembling the shaft.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
handling works		Per unit	1.0
Mechanical works		Per unit	1.0

To be executed by: Yard

Surveyed by: Class, Owner's representative

Description:

1_Main Propeller

weight 4525 kg_6 blades

Propeller: mounted on SKF tapered sleeve, Specifications NRH 4553 instruction manual

Mark before removal, of the fitting on the propeller shaft cone

Propeller removal/reinstallation in the workshop

Dimensional readings

Dye checking of hub and blades

Assembly to specification

Fine sanding of propeller (max 150 grit)

B9 & B10 measurement of shaft lift before start and end of work, vessel afloat

2_Bow thruster propeller

Dye checking of hub and blades

Fine sanding of propeller (max 150 grit)

3_Stern thruster propeller

Dye checking of hub and blades

Fine sanding of propeller (max 150 grit)

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Main propeller works		Per unit	1.0
Bow thruster propeller		Per unit	1.0
Stern thruster propeller		Per unit	1.0

To be executed by: Yard

Description:

Complete overhaul under the shipyard's responsibility

Plan drucklager thrust bearing LAZ 280 07/7975/1034/1

Plan drucklager thrust bearing LAZ 280 07/7975/5190/3

Propulsion motor AC thrust bearing

LOHMANN&STOLTERFOHT thrust bearing Model: LAZ 280/1263

Serial number: 1263

Number of pads: 10 front, 10 rear.

ISO-VG 100 lubrication unit

Housing drain

-Check axial play of thrust bearing before work.

-Remove all accessories mounted on the thrust bearing (hoses, temperature sensors, various cables).

-removal of the top cover of the 1/2 upper housing.

-Removal of front and rear 1/2 upper moons. Removal of upper shell.

-Check clearance between oil scraper and thrust collar.

-Removal of upper bushing.

Remove upper 1/2-rings and pads.

Lubrication ring removed and rotor relieved.

-Removal of the lower 1/2 pad holder crowns and removal of the pads.

-Lower bearing removed.

-Checking the dimensions and surface condition of: bearings, pads, collar.

-Careful cleaning of dismantled parts and waiting protection if necessary.

-Careful cleaning of the thrust bearing housing.

-Reassembly of the dismantled assembly (1/2 bearings, pads, collar coated with VISGA 46, joint faces with CURTYL T film).

On-board tests (lifting the shaft with lubrication units, dial gauge measurements).

-Check that the thrust bearing is watertight.

Note: the thrust bearing will be drained and re-oiled on board.

Thrust bearing only inspection of upper 1/2 bearings:

-removal of oil cooler, careful cleaning of housing,

-Hydraulic test of coolant in workshop 5b.

-Reassembly.

-Temperature sensors on thrust bearings: check of sensor calibration in the workshop.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Side to coupling bearing		Per unit	1.0

To be executed by: Yard

Description:

Complete overhaul under the shipyard's responsibility

opposite side to coupling_ propulsion motor bearing

RENK bearing Model: EFNLQ 28-280

Serial number: 449 744/1-93

Important note: prior to the work, consult the CEGELEC documentation and drawing no. 193-28124-0001 B available on board and schedule a short meeting on this subject with the GENAVIR technical department and the Chief Engineer.

- Removal of the encoder wheel in the presence of the Chief Mechanic (measurements to be taken before dismantling).
- Removal of the encoder wheel protective cover.
- Removal of the upper bearing housing and the upper 1/2 bearing.
- inserting a 5 mm copper plate into the air gap (bottom, top, bd and td).
- Remove the lubrication ring, spring, floating labyrinth seals and lower support.
- Lightly lift the shaft using a jack and check the lift using a dial gauge.
- remove the lower 1/2 bearing
- Remove the second labyrinth seal spring and the 2 1/2 seals.
- Seal the bearing with 150 micron polyane and adhesive.
- Dimensional inspection of 1/2 bushings and surface finish.
- check the condition of the Teflon insulation on the shells and the insulation on the bearing centring pin.

important note: damage to the insulation caused by impact or other causes, not discovered during inspection, will lead to the passage of circulating currents from the rotor and consequently to pitting of the shaft bristle at this bearing (steel/oil contact resistance, change of medium).

- Perfect cleaning of the various dismantled components and temporary protection of the dismantled parts.
- Thorough cleaning of the bearing housing and top cover.
- Reassembly of the dismantled assembly (1/2 bearings coated with VISGA 46 oil, the housing gasket surfaces degreased and then coated with a film of CURTYL T paste or equivalent).
- See the GENAVIR technical department or Chief Mechanic for specific

See the GENAVIR technical department or Chief Mechanic for the special arrangements to be followed for reassembly of the various bearing sealing components.

- Installation of the encoder wheel in the presence of the Chief Mechanic (dimension to be checked).

On-board tests (lifting the shaft with lubrication units, comparator measurements).

Note: the bearing will be drained and re-oiled on board.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
opposite side to coupling bearing		Per unit	1.0

To be executed by: Yard, Crew

Description:

The gondola is the part of the vessel holding most of the acoustic equipment, it is filled with seawater and interior might be dirty and filled with sediment.

See drawing ED474-2100-CM40-N Gondole & ED474-2100-CM40U-G Usinage pour gondole for gondola arrangement

All following jobs must be done under Genavir supervision:

Beginning of drydock

- All templates and covers need to be removed, and cleaned using HP water cleaning
- Inside gondola must be cleaned using standard low pressure water hose
- All threads must be cleaned using the appropriate tap
- Watertight seal from the ADCP38 , ADCP 150 and sub bottom profiler acoustic windows must be replaced. New ones have to be made out of Sentinel® X or equivalent material.

Before undocking

- All cover need to be mounted using the correct torque (given by Genavir supervisor)
- Bolt heads need to be covered with Rotabond 2000 (Kent) or equivalent product.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Cleaning and inspection		Per unit	1.0
supply of watertight seal for acoustic window		Per unit	1.0
Rotabond		Per unit	1.0

List of attachments:

- 1) ED474-2100-CM40-N Gondole.pdf, 2.47 MB
- 2) ED474-2100-CM40U-G Usinage pour gondole.pdf, 1.33 MB

To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

All materials shall be supplied by yard, except if the contrary is clearly expressed in the specification.

STRAUB fittings shall be provided by yard when requested with BV 3.1 certificates

Only seamless pipes are allowed.

Painting of the damaged / welded areas according to the recommendation of the paint's maker representative shall be included (quotation is for ST2 treatment and 300µ dry thickness of paint applied by brush)

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

To be executed by: Yard

Description:

Valves and pneumatic fitting will be supplied by owner

Air distribution on portside aft deck C

- Consign the pipe section
- Remove the extractor fan of the fish room and the siding behind it, upper and lower part
- Cut the old pipe, remove the sealing deck and take off the pipe
- Replacement of the passage-deck by a steel passage ext diam 20mm, int diam 12 mm, length: 100mm.
- Weld the new identical steel pipe
- Put a new valve and a pneumatic fitting as it was
- Replace the clamps
- The crew will check the absence of leaks before the reassembling of the lining's fish room by the shipyard

Air distribution forward deck E

- Consign the pipe section
- Remove siding in deck D air-conditioning room for access to pipe
- Cut the pipe
- Replacement of the passage-deck by a **stainless-steel** passage ext 20mm, int 12 mm, length: 100mm.
- **Decoupling stainless steel from deck steel**
- Weld the new pipe in HP 3/8 **stainless-steel**, 900 mm long. Provide a thread for fitting the block valve.
- Test with crew for no leak
- Reassembly of the deck D siding air conditioning room

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Air distribution on portside aft deck C		Per unit	1.0
Air distribution forward deck E		Per unit	1.0

Images:

(Images start on next page)



Air pipe



Extractor fan

Sidings

To be executed by: Yard

Description:

Valves and pneumatic fitting will be supplied by owner

Service air distributor on portside deck E

- Consign the pipe section
- Fitting dismantling above and below deck E
- Replacement of sea watertight passage-deck vertical hose segment:

Ø steel pipe HP, Aext 20mm, Aint 12 mm, length 850 mm

- Fittings replacement : steel, 3/8 "
- Test for leakage should be done with the ship's crew

Service air distributor on starboard side deck C aft station

- Consign the pipe section
- Fitting dismantling above deck C
- Head lining removal below deck C (fishing room laboratory deck B) *
- Fitting dismantling below deck C *
- Replacement of through-deck sea watertight vertical hose segment: steel pipe HP, external diameter 20mm, inside diameter 12 mm, length 300 mm
- Fittings replacement: steel, 3/8 "
- Test for leakage should be done with ship's crew
- Head lining reassembly

*** Critical access to pipe below deck C, even after lining dismantling. Shipyard expected to provide a solution with upper access only, if any.**

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Service air distributor on portside deck E		Per unit	1.0
Service air distributor on starboard side deck C aft station		Per unit	1.0

Images:

(Images start on next page)



C.003_water piping for external container supply stations on deckC.003

To be executed by: Yard

Description:

NB: Valves, straub coupling and fittings will be supplied by the shipyard

Synchronize works with chapter C.001 & C.002

Grey water pipes on starboard and portside deck C (2 pipes)

installation of ED isolation valves for the containers and purge valves to prevent the circuit freezing

Replacement of the deck passage for grey water piping (DN40) with elbow and guillemin fitting for the C to Bd and Td deck container stations

- Consign the pipe section
- Take advantage of the C.001 preparation works
- Cut the pipe
- Prepare new pipes with threads in the workshop
- Replacement of the deck passages by a steel ones
- Weld the new prepared pipes
- Test with crew for no leak

Cold and warm sanitary water portside D deck (2 pipes)

Replacement of the deck passages and the warm (DN20) and cold (DN25) water pipework with valves and fittings.

- Remove the straub couplings
- Prepare the new pipe sections in the workshop: replace the DN20 and DN25 steel pipe with a section as it was in the past when the clamps can be fitted to the structure.
- The upper part must be threaded so that a *guillemin* fitting can be screwed on
- Replace the deck passage
- Reassemble with valves and fittings on board with grease around the threads
- Straub fittings must be renewed
- Valves must be renewed

Sea water on all container feed stations (10 pipes)

For each feed station (5), replacement of the two DN40 seawater pipes (supply/return) containers up to the straub coupling and repair of the deck passages:

- Remove the straub coupling
- Prepare the new pipe sections in the workshop: replace the DN40 steel pipe with a section of the same shape, material and dimensions.
- The upper part must be threaded so that a *guillemin* fitting can be screwed on
- Depending on the condition of the deck passage, repair or replace if necessary
- Reassemble with valves and fittings on board with grease around the threads
- Straub fittings must be renewed
- Valves must be renewed

Special case of the E deck feeding station

Due to a recurring problem with the positioning of the gangway, the worksite will have to carry out the following work in addition to that listed above:

- Relocation of the feeding station to a suitable position +/- 2 m towards the front of the vessel.
- Plan to fill in the old deck openings with a steel plate of the same thickness as the E deck plate.
- Install the feed station identically to her new position.
- Modify the piping below deck to supply the new station.
- Make the necessary adaptations to install the accommodation ladder as far aft as possible.
- Provide a martyr plate to prevent the gangway from rubbing on the deck.
- Plans for this work will be drawn up in advance and submitted to the owner for approval.

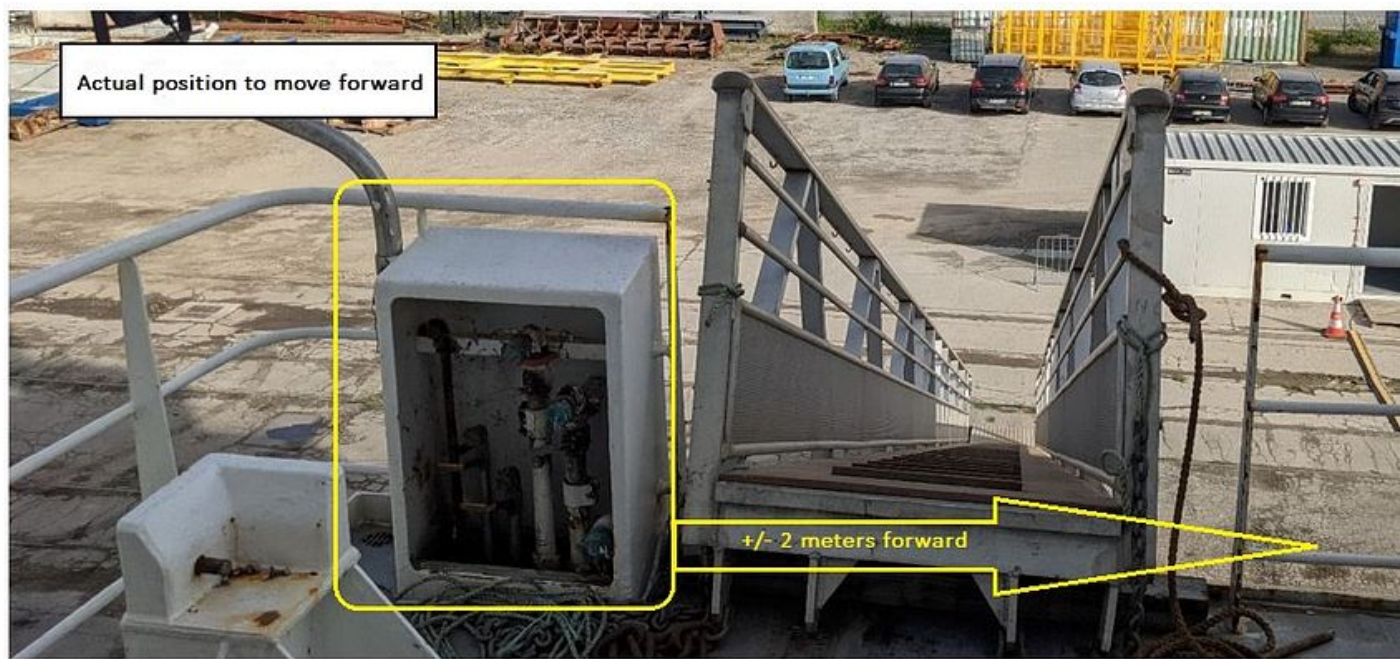
Cost items, yard:

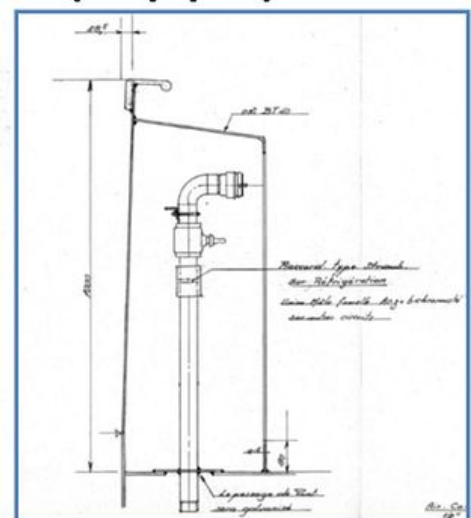
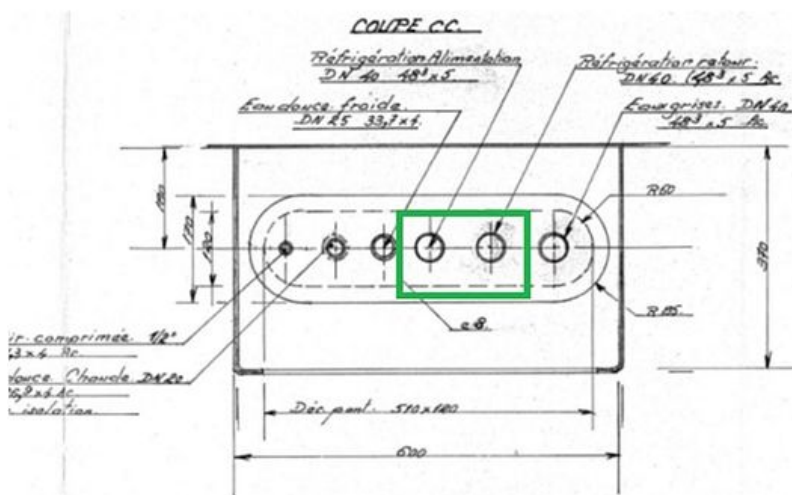
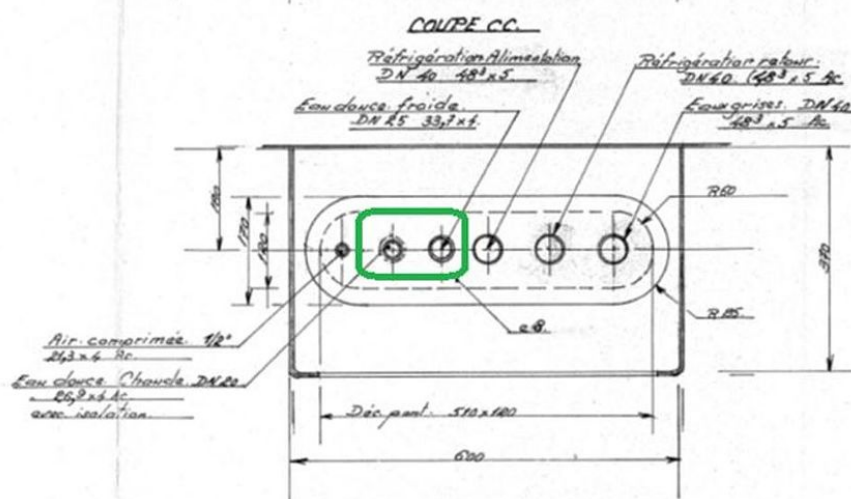
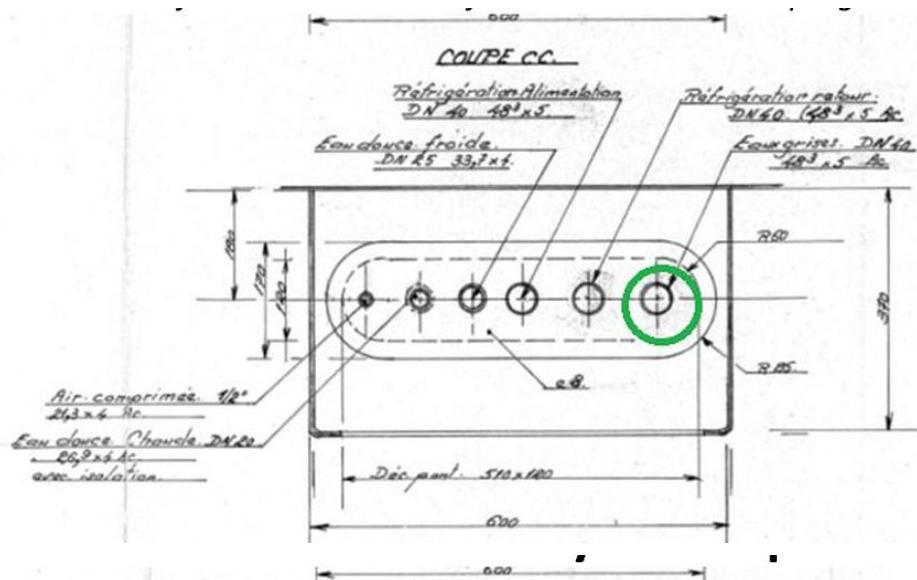
In the provided Excel sheet, please quote on the following cost items:

C.003_water piping for external container supply stations on deckC.003

Name	Description	Quote type	Quantity
Grey water pipes on starboard and portside deck C (2 pipes)		Per unit	1.0
Cold and warm sanitary water portside D deck (2 pipes)		Per unit	1.0
Sea water on all container feed stations (10 pipes)		Per unit	1.0
Special case of the E deck feeding station		Per unit	1.0

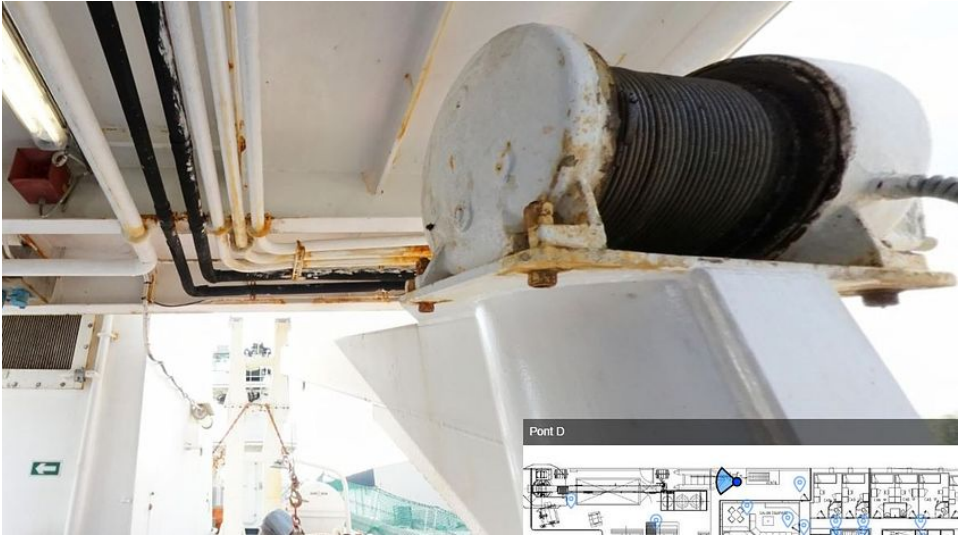
Images:





C.003_water piping for external container supply stations on deckC.003

In green the location of the feed stations



To be included: Corrosion protection, Cleaning after, Paintwork, Welding, Provide reports

To be executed by: Yard

Surveyed by: Owner's representative

Enclosed: Picture

Description:

Refurbishment of waste water discharge pipes after consignment of the sanitary drainage circuit (EVAC + galley + accommodation drainage) in the waste water room, deck A, C67-70, port side

Replacement of the 2 sections of pipework marked in red in the appendices below.

- 4 linear meters_ DN100 pipe (ext. dia. 114.3), Schedule STD
- 7 x Weld-on flat flange in steel PN10 (DIN 2576) - DN 100 - Ø 114,3mm - 8 holes
- 2 x Weld-on flat steel flange - DIN 2576 - DN 125 - Ø139,7 - PN10 - 8 holes
- 2 x Welded steel reducer DN100 -> DN125
- 2 x T-piece DN100
- 4 x butterfly valve DN100, (ex : Danfoss Scola - Sylax - PN16 - ref :149G019988)

The discharge manifold must be reinstall by the shipyard after the painting system in accordance with INTERNATIONAL recommendations.

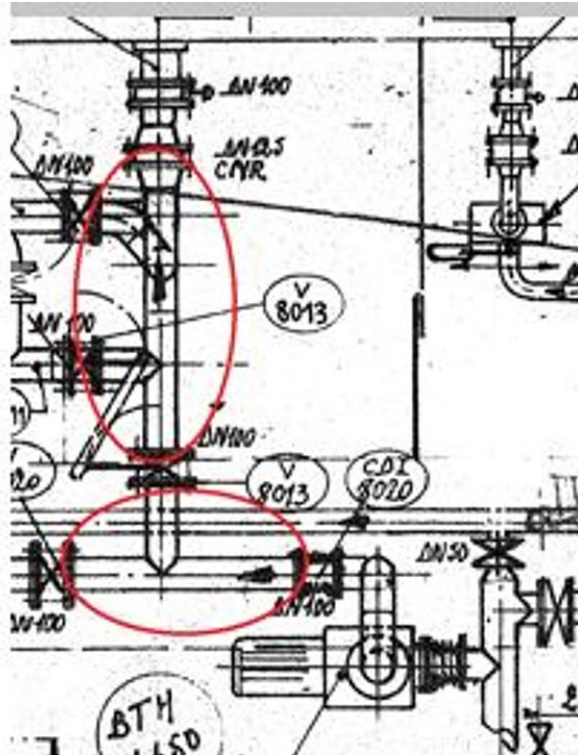
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Black water discharge replacement		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

-Removal of the geaquello+flammadur deck seal

-Removal of SAE flanges above and below deck (if too difficult to access below deck, use a more efficient method such as cutting and welding).

NB: The ship repair yard is responsible for recovering any oil remaining in the hoses.

-Removal of roxtec-type seals **(other model in place, perhaps not adaptable with roxtec, so keep the old ones).**

-Replacement of the 14 sections of HP hydraulic tubes passing through the deck with stainless steel tubes according to the nomenclature supplied in the appendix.

NB: Hydraulic pipes to be replaced are listed below:

- T75, T74, T42, T41
- T72, T71, T61, T60, T56, T55 (starboard)
- T72, T71, T62, T57 (portside)

-Replace deck seals

-Cleaning and fitting of geaquello + flammadur supplied on site

-Pressure tightness tests

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
passage deck piping		Per unit	1.0



Images:

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VERINS RD1 : (AN : les tuyauteries T50 et T63 ont déjà été remplacé en juin 2024)

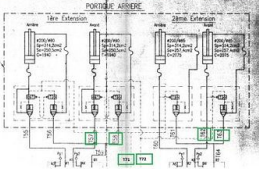
NOTA : Les tuyauteries acier au dessus du pont B seront réalisées avec des collets en acier inoxydable 316L et seront shopées.

REP		DESIGNATION	DIAMETRE	PROFONDEUR	Ø ext	Ø int	Ø ext	Ø int	Ø ext	Ø int	Ø ext	Ø int
					mm	mm	mm	mm	mm	mm	mm	mm
T51	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T52	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T53	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T54	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T55	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T56	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T57	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T58	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T59	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T60	ALUM/ALUM	VERIN RD1	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80



Already replaced in june 2024



Continue the job as the same way for all others corroded pipes

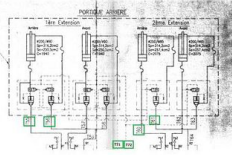


VERINS RD2

NOTA : Les tuyauteries acier au dessus du pont B seront réalisées avec des collets en acier inoxydable 316L et seront shopées.

REP		DESIGNATION	DIAMETRE	PROFONDEUR	Ø ext	Ø int	Ø ext	Ø int	Ø ext	Ø int	Ø ext	Ø int
					mm	mm	mm	mm	mm	mm	mm	mm
T61	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T62	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T63	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T64	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T65	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T66	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T67	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T68	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T69	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T70	ALUM/ALUM	VERIN RD2	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80





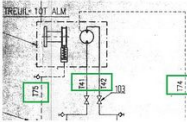


TREUIL 10T

NOTA : Les tuyauteries acier au dessus du pont B seront réalisées avec des collets en acier inoxydable 316L et seront shopées.

REP		DESIGNATION	DIAMETRE	PROFONDEUR	Ø ext	Ø int	Ø ext	Ø int	Ø ext	Ø int	Ø ext	Ø int
					mm	mm	mm	mm	mm	mm	mm	mm
T71	ALUM/ALUM	TREUIL 10T	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T72	ALUM/ALUM	TREUIL 10T	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T73	ALUM/ALUM	TREUIL 10T	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T74	ALUM/ALUM	TREUIL 10T	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80
T75	ALUM/ALUM	TREUIL 10T	114	800	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80	Ø 114	Ø 80





To be executed by: Yard

Description:

All pipes showing signs of corrosion will be replaced

When the Aframe is laid, the superintendent and the ship repair yard's works manager will go out to inspect the equipment to agree on the scope of work required.

Please give an estimate quotation for 8 meters of DN50 HP piping replacement.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Corroded pipes replacement		Per unit	1.0

To be executed by: Yard

Description:

Location: Under the auxiliary gangway, between the seawater intake valve on the crossbar and the bulkhead passage to the DA room,

Requirements: Insulation and draining of the cross beam by the sorting room wash pump with zero head. No more main refrigeration.

The pipework is damaged under the clamp, the distance between the ends of the two pipes varies between 10 and 20 mm, greater than the 5 mm recommended for using the STRAUB clamp in place.

Work to be quote by the ship repair yard:

OPTION 1: Refurbishment of the existing pipework with replacement of the STRAUB clamp.

OPTION 2: Replacement of the existing assembly with a flange connection.

Materials:

- 2m linear DN50 Galvanised pipe, including 2 90° elbows,
- STRAUB Metal Grip collar DE60.3mm for DN50 pipe.

Diagram attached as image

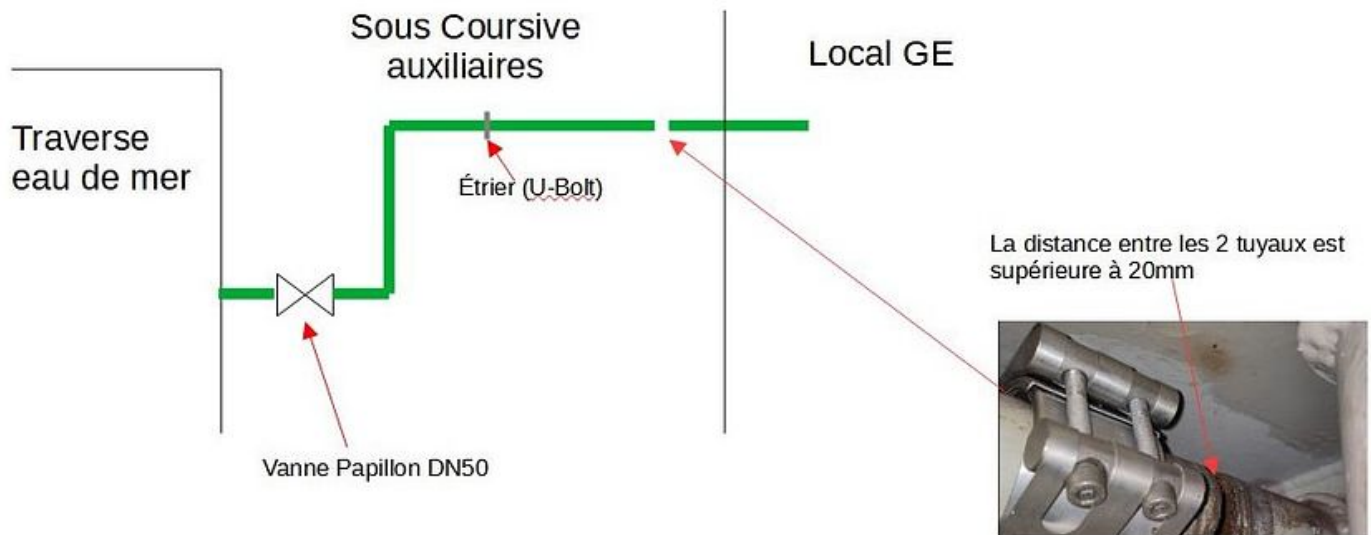
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
OPTION 1: Refurbishment of the existing pipework		Per unit	1.0
OPTION 2: Replacement of the existing assembly with a flange connection.		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

Location: Upassage way just above BIOSEA electric cabinet_deck A

- Protection of the surrounding environment
- Cutting out the corroded portion of the pipe between the straub collars

DN 100 pipe, 1.50 m long, in galvanised steel with a 90° elbow, a 30° elbow and a DN40 tapping with plug on the 90° elbow.

- Reassembly of the new pipe and replacement of the STRAUB clamps
- Leak test in the presence of the ship's crew

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Drain strainer pipe replacement		Per unit	1.0

Images:



To be executed by: Yard

Surveyed by: Class

Description:

Location: B deck / Carpentry room to starboard

Flow 90 m3/H / 70 m water column height

- Removal of actual diesel engine fire pump unit
- Fit the new complete fire pump unit (supplied by ship's owner) on actual seating with necessary adaptations (plans are in appendix)
- Connect sea water pipes to the new complete fire pump unit with necessary adaptations
- Connect exhaust manifold to the new complete fire pump unit with necessary adaptations
- Including repair of the paint inside/outside the hull after welding
- Tightness test
- Functional test with BV surveyor (BV surveyor service to ship's owner charge)

Cost items, yard:

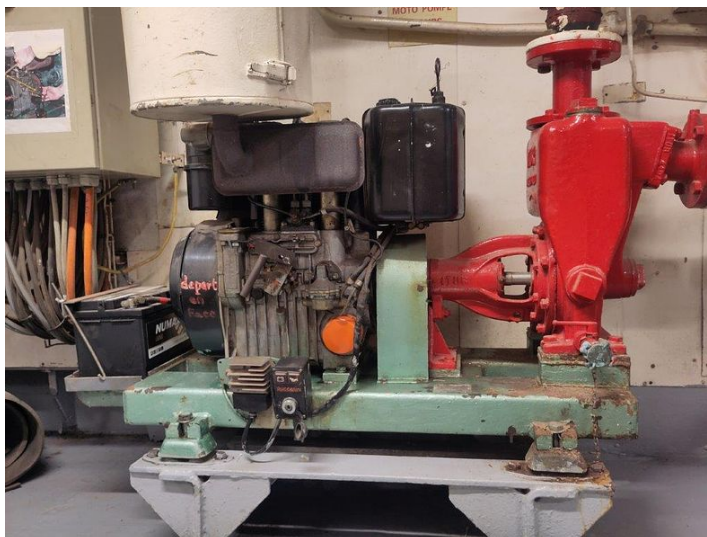
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
New Moto fire pump adaptation		Per unit	1.0

List of attachments:

- 1) EM 25_C - Aménagement du Magasin de Trunk.pdf, 3.3 MB
- 2) IMG_20250310_084147.pdf, 274 KB

Images:





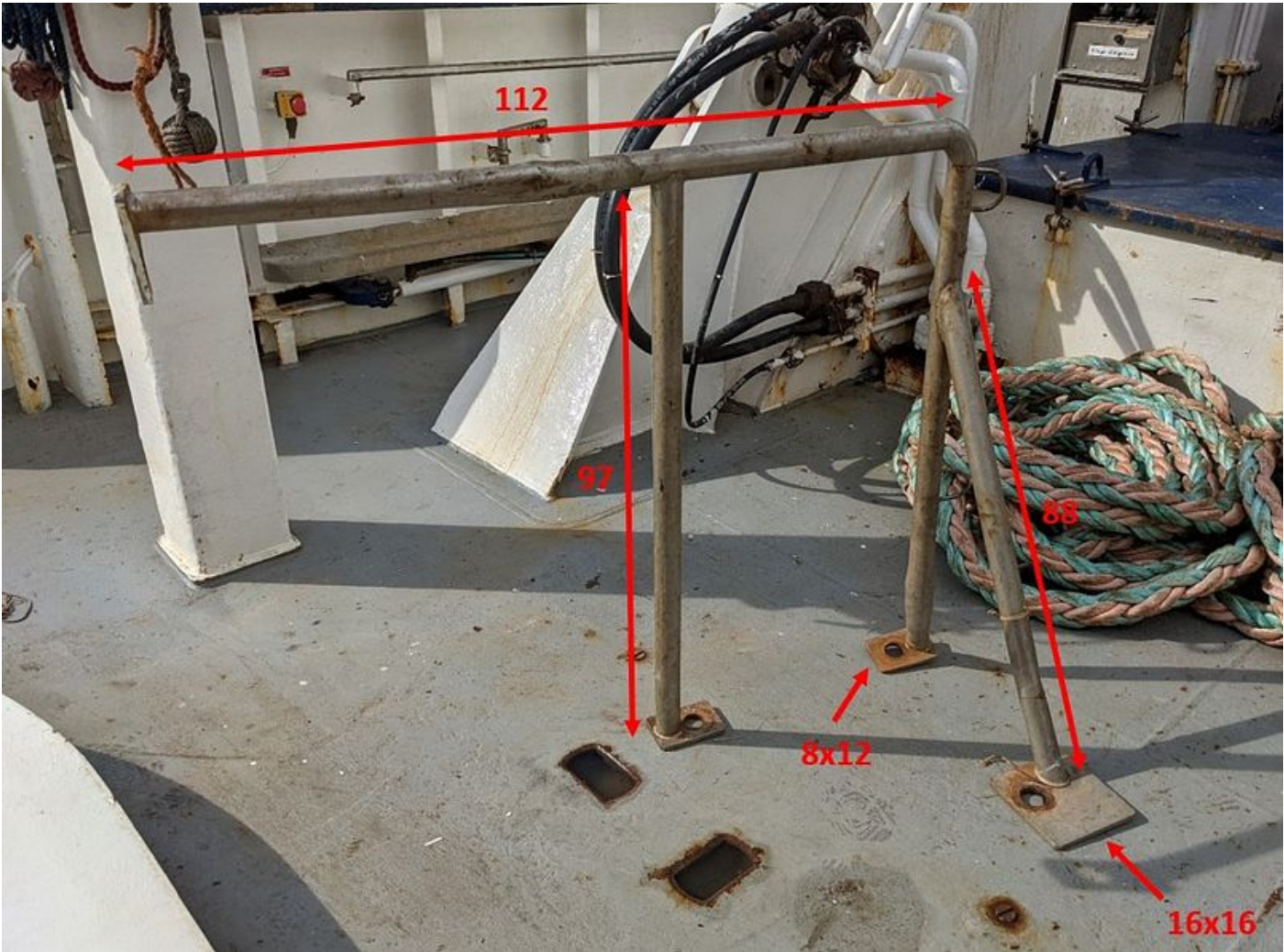
To be executed by: Yard

Description:
OPTION 1: Identical repair based on the attached picture
OPTION 2: Proposal to replace only the folded parts
Stainless steel tube, total 3940 linear mm, diameter 60

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
OPTION 1: Identical repair based on the attached photo		Per unit	1.0
OPTION 2: Proposal to replace only the folded parts		Per unit	1.0

Images:



To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

All materials shall be supplied by yard, except if the contrary is clearly expressed in the specification.

Painting of the damaged / welded areas according to the recommendation of the paint's maker representative shall be included (quotation is for ST2 treatment and 300µ dry thickness of paint applied by brush) except if the contrary is clearly stipulated. Pre-painted steel plates shall be preferred for large areas if needed.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

List of attachments:

1) 24-190-100-GENAVIR-THALASSA-Mesures d'épaisseurs.pdf, 2.04 MB

To be executed by: Yard

Description:

CAUTION: Electrical cable routing behind the CO2 cylinders and pipe bridge routing

- Disconnect and remove the 11 cylinders
- Protect the components around the cable tray
- Protection in the drum room on deck B
- Cutting the deck 300 x 150 mm, taking care not to cut the electrical cables.
- Cutting sheet metal around the cable passages
- Joining sound metal plate and tube for cable passageway
- Renew corroded piping (1 linear meter_steel DN 40)
- Renew deck passage
- Cable passage to be sealed again

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

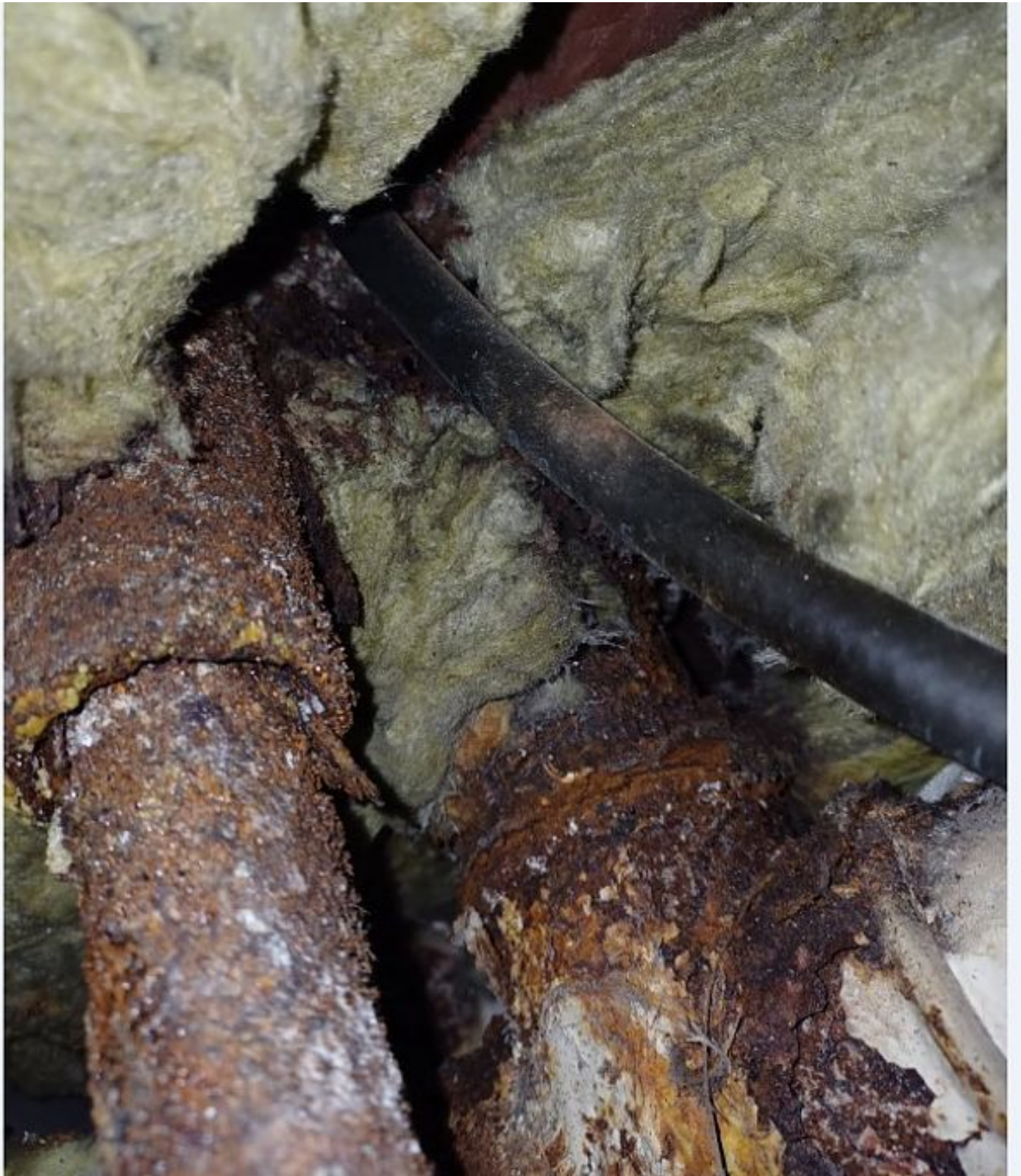
Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Deck passage repairs		Per unit	1.0

List of attachments:

- 1) TU 75 - PL 1-3 - Aménagement Local CO2.pdf, 6.89 MB
- 2) TU 75 - PL 2-3 - Aménagement Local CO2.pdf, 4.13 MB
- 3) TU 75 - PL 3-3 - Aménagement Local CO2.pdf, 9.75 MB

Images:





To be executed by: Yard

Description:

As a reminder:

Preparatory work:

- Dismantling aluminium shelving racks
- Remove the evaporator, copper pipes and electric cables
- Secure the gas and electricity supplies
- Removal of the existing layer in the room

Checking work:

- Removal of the wooden cleats
- Check the integrity of the condition of the metal sheeting
- Depending on the condition of the metal frame:

-----Paint treatment of the sheet metal or replacement if needed----

Floor: 12.25m2.

Ceiling: 12.25m2.

Partitions (4): 10.5 m2 x 2 and 12 m2 x 2.

Total: +/- 70m2

A budget offer is requested. Final scope to be defined after removal

To be quoted :

- 2 days of hot work with 50 kg of steel

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
2 days of hot work		Per unit	1.0

To be executed by: Yard

Description:
Damaged threads on the 2x8 holes for the 2 tap bolts

- Removal of the two supports using an oxycutter.
 - Welding of 2 new supports.
 - Magnetometric inspection of welds and BV validation.
 - Paint treatment after work to specification.
-
- The supports will contain 8 M16 threaded holes.
 - Bracket thickness: at least 10mm. To be checked on dismantling.
 - Bracket inside diameter: 400mm, outside diameter: 600mm.

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Damaged threads replacement on the 8 holes tap bolts		Per unit	2.0

Images:



To be executed by: Yard

Description:

An inspection will be carried out with the superintendent once the gantry has been removed to confirm the exact scope.

Following items shall be quoted :

- Removal of unused supports and accessories as shown in the photo 'D.004 on both sides remove '.
- Removal and replacement of corroded pipe supports as shown in photo 'D.004 pipes supports and clamps '.
- (shipyard supplies)
- Removal and supply of plugs and sockets with identical fittings (shipyard supplies)
- Replacement of damaged stainless steel cable trays

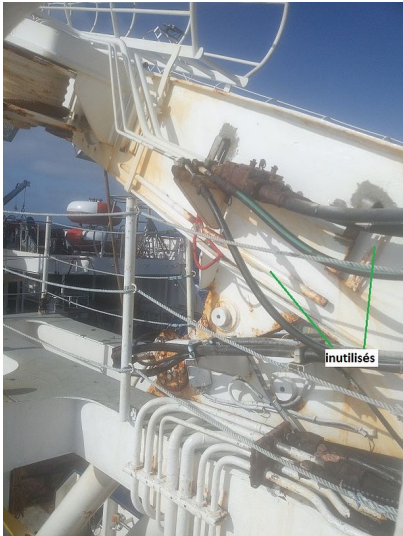
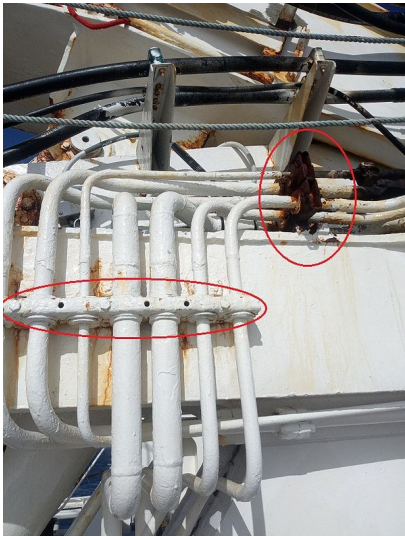
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Aft Aframe steel works		Per unit	1.0

Images:

(Images start on next page)





D.005_ Hatches on starboard c & b deck_Access to Engine Room D.005

To be executed by: Yard

Description:

The watertight panels on the starboard drum, one on the ceiling (drum access to C deck), the other on the floor (drum access to DA room) are no longer watertight because of the wear of their coamings.

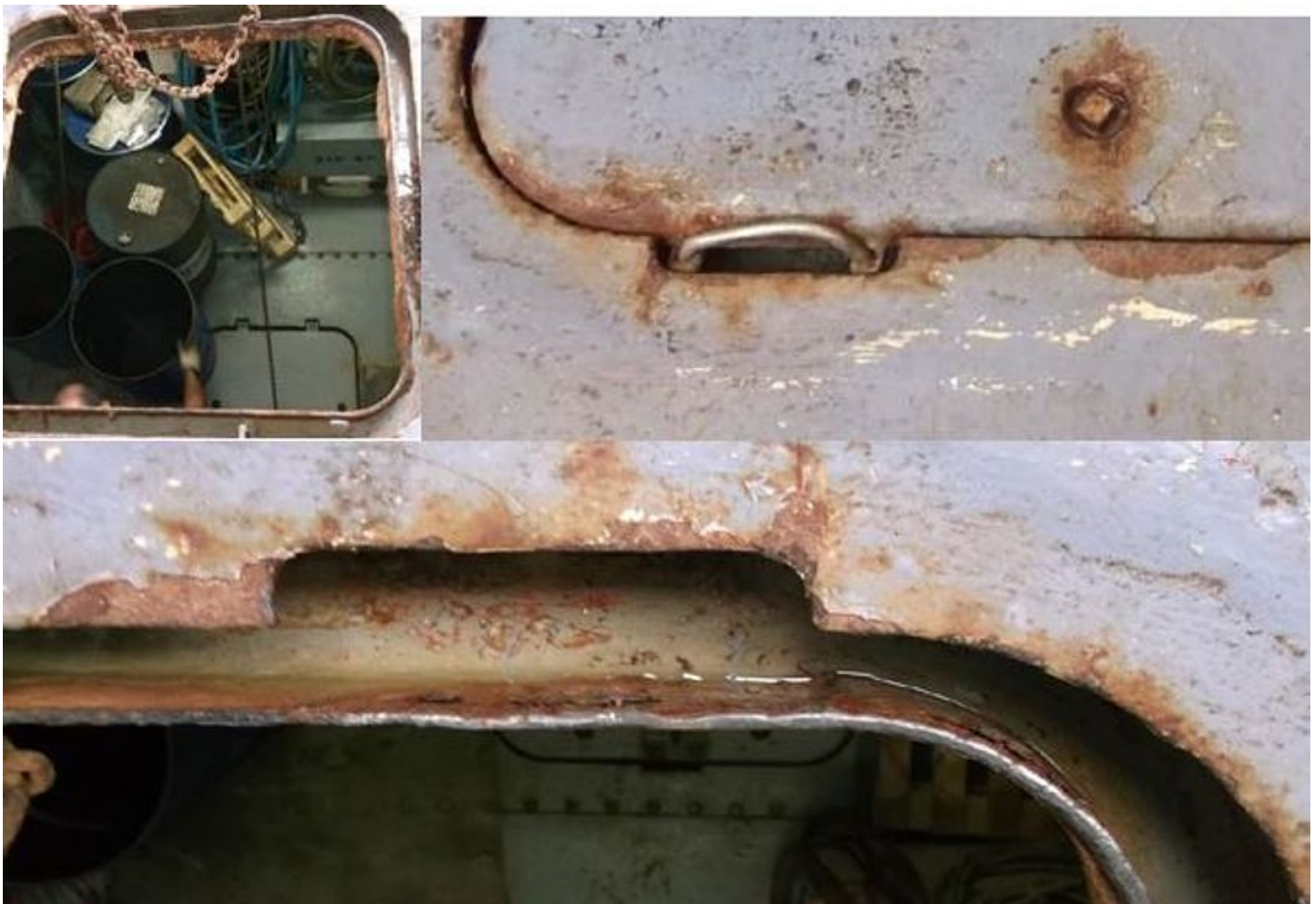
- Taking off perforated sheet metal trim of starboard drum ceiling and DA room ceiling.
- Replacement of the coaming on each hatch (dimensions 810x810mm).
- Perforated sheet metal trim to be replaced with new one in starboard drum.
- On the hatch on C deck, replace the opening handles which are deformed.
- hosing tightness tests in the presence of the ship's crew and BV surveyor

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	2.0
Watertight hatches repair		Per unit	2.0

Images:



To be executed by: Yard

Description:

Repair of the oil water separator drip tray

Removal of the old casing and fabrication of a new one with connection of the drain to H2 (existing circuit).

NB: Welding a liner will not be possible.

- Remove the separator and all the piping in the environment to clear the work area.
- Remove the old recovery pan
- Make a new identical steel tray with the connection to the H2 box
- Paint treatment in accordance with international specifications
- Installation on board
- Reassembly of pipes and separator
- Tests in the presence of the crew

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Repair of the oil water separator recovery trough		Per unit	1.0

To be executed by: Yard

Description:

Edge parquet under ballast pump, biosea and clarinet draining U-shaped passageway

Removal and replacement of pierced steel casing. 7m x 15cm

- Environmental protection and safety
- Cut out the damaged area over a length of 7 m
- Preparing an identical steel sheet
- Welding on site
- Painting by the shipyard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
U-shaped passage repair		Per unit	1.0

To be executed by: Yard

Description:

The lower part of the frame has lost a lot of material; it was 8 mm thick when it was new and is now less than 4 mm.

- Cut the sheet until the nominal thickness is reached.
- Make an insert and weld it in place
- Make a new 50/8 mm section flat bent to the shape of the cut section and weld it in place.
- Painting by the crew of the vessel
- Test for correct closure and watertightness in the presence of the crew.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
CO2 local Watertight door repair		Per unit	1.0

Images:



To be executed by: Yard

Description:

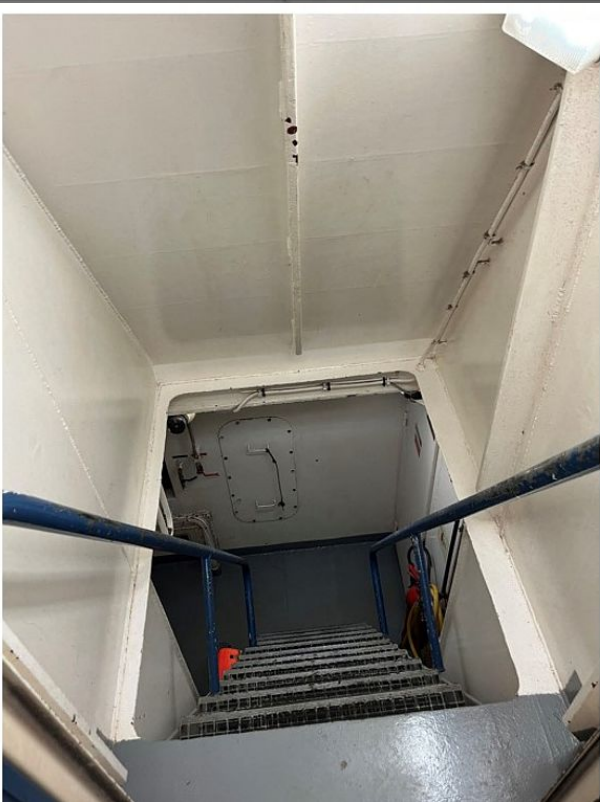
- Welding of a 500 kg SWL lifting ring at the top of the companionway to deck A
- The superintendent and the works manager will define the exact location where the ring will be welded.
- Provide NDT + Load Test 1,25 x SWL
- The pad eye will be supplied by yard
- Paintwork done by the crew

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Welding of a 500 kg SWL lifting ring		Per unit	1.0
NDT		Per unit	1.0

Images:



To be executed by: Yard

Surveyed by: Class

Description:

Repairs to the galvanised steel reinforcement of the 0°C scientific hold

- Protection of the surrounding area
- Cutting out corroded parts.
- Identical reconstruction with brand new metal
- Cleaning after work

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Steel replacement		Per unit	1.0

Images:



To be executed by: Yard

Surveyed by: Owner's representative

Material supply by: Yard, Owner

Description:

Number: 6 deck C_location on photo attached

Threaded holes are fitted on the working decks to fit various scientific equipment.

M30 insert and deck fastening screw will be supplied by the owner

A site survey for this item will be carried out at the beginning of the technical stop in the presence of the superintendent to refine the scope of the work.

Quotation is for:

- Cleaning and tapping of the deck insert OPTION 1
- A repair by drilling to a larger diameter and welding in an M30 insert OPTION 2
- Complete replacement of the deck fastening screw OPTION 3
- If necessary, remove ceiling and/or insulation below
- Cut the deck screw on the deck and on the framework below
- Weld a new deck fastening screw
- Put back insulation and/or ceiling if removed
- **SWL 2.5MT load test at 3.125MT (x6)**

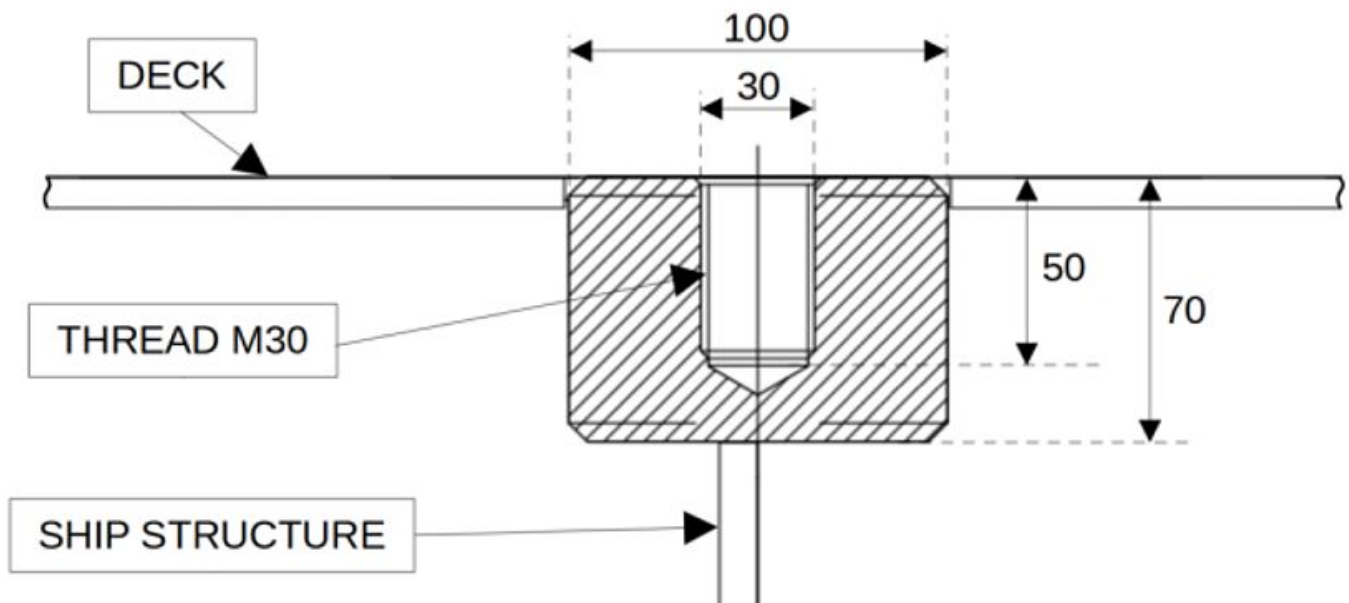
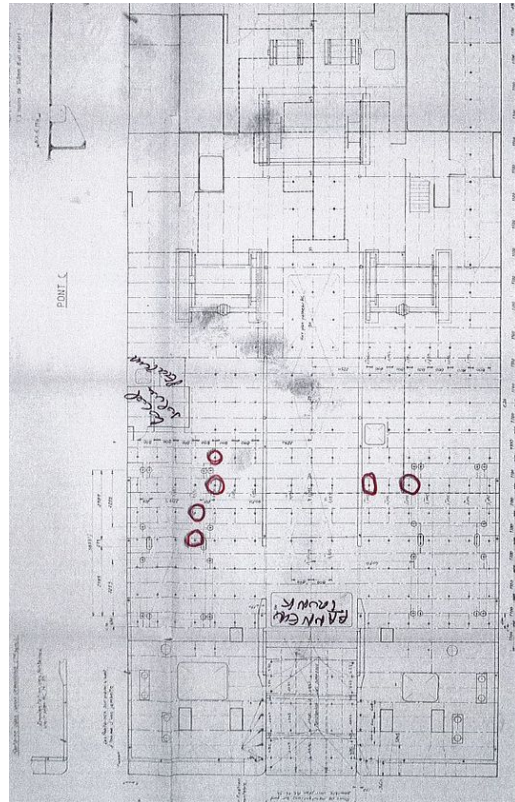
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Simple cleaning and tapping of the deck insert		Per unit	1.0
A repair by drilling to a larger diameter and welding in an M30 insert		Per unit	1.0
Complete replacement of the deck fastening screw		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Surveyed by: Class, Owner's representative

Description:

Repairs of C8 DO tank top plate to be performed iwo port side shell from fr 15 to frame 26, see alpha technique UTM company report n° 24-91-100 for more details

BV references: BRT0/2024/J5115-H1R

Following thickness measurements carried out in May 2024, repairs are required to the ballast ceiling of the C8 fuel tank. The ship repair yard must quote for this ITEM:

- Opening and pumping of the C8 tank
- Gas free certificate
- Scaffolding
- Removal of the environment for the work on the fishing laboratory side
- Creation and welding of the inserts in accordance with the design office's plans, obviously complying with the classification society's rules.
- Tightness testing of welds
- Cleaning the tank after the work has been completed
- The painting work on the fishing laboratory side corresponds to ITEM F.005
- Replace the entire environment after painting F.005

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

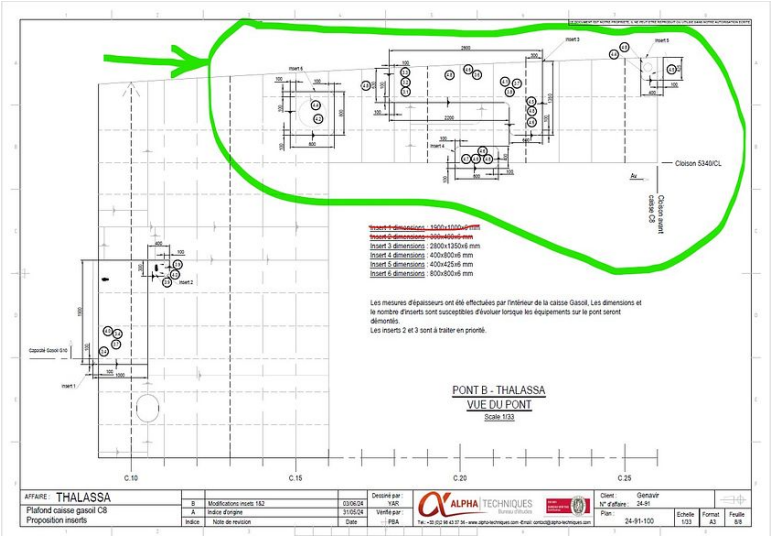
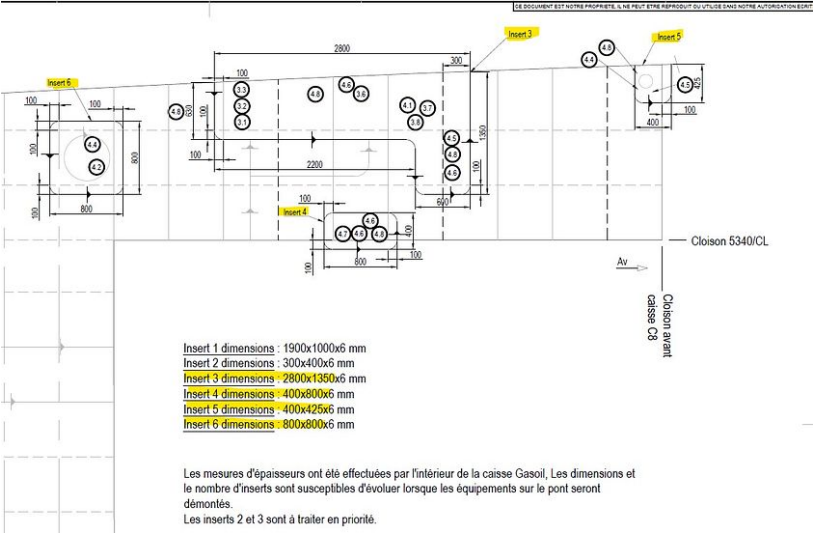
Name	Description	Quote type	Quantity
C8 tank cleaning and ventilated		Per unit	1.0
Protection_access_cleaning		Per unit	1.0
Hot repair works		Per unit	1.0
Various tests, exams and reports		Per unit	1.0

List of attachments:

- 1) 24-91-revB.GENAVIR-THALASSA-Mesures d'épaisseurs du plafond de la caisse à combustible C8.pdf, 794 KB
- 2) PL 05_Q - Plan des Capacités.pdf, 9.22 MB

Images:

(Images start on next page)



To be executed by: Yard

Description:

Location : around watertight panel deck Forward store.

- Creation of a watertight deck penetration for electrical cable in the ship's deck (freeboard deck)
- Welding 2 brackets to accommodate LED lighting (Genavir Supplies)

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Watertight deck passage creation		Per unit	1.0
NDT		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Surveyed by: Class

Description:

The surface of the ballast top plate at the bottom of the dry mesh is completely corroded, as is the crown supporting the manhole hatch (damaged threads). There is water coming from the chain well, which is regularly drained.

Description of work:

- Repairs to the entire surface, adjoining partitions and hatch.
- Pitting, sanding.
- Making the necessary inserts
- Replacement of the crown of the manhole.
- Painting system. see item f.016

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

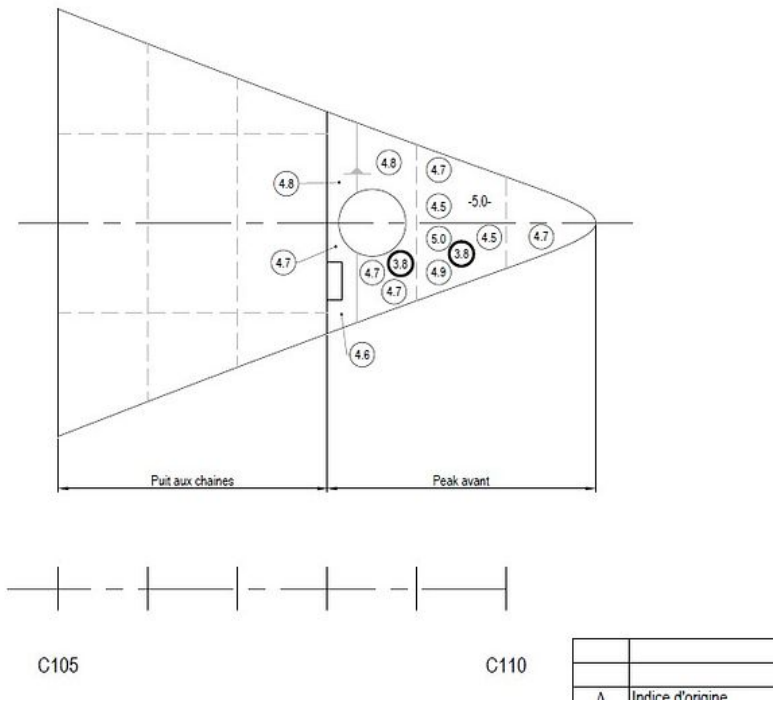
Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Hot repair works		Per unit	1.0
NDT		Per unit	1.0

Images:

(Images start on next page)



Plafond de ballast EM1



To be executed by: Yard

Description:

- After ensuring that the EM1 seawater capacity is completely empty
- Lock out ballast valves and pump
- Remove the valve located in the forward propeller room as shown on the appendix
- Replace with new valve supplied by owner
- Adapt the remote control in place on the valve control stem.
- Put the system back into service and test it for operation and leaks with crew.

ASBESTOS

In 2024, the flange joints were analysed while GENAVIR was updating the vessel's Asbestos Technical File.

- Describe and quote the removal procedure
- Asbestos protocols to be validated with the superintendent prior to dismantling
- We would also like to know the procedure for handling this type of waste.

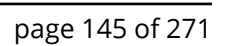
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Sea water ballast EM1 valve replacement		Per unit	1.0
Asbestos disposal		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

- Removal of the corroded duct.
- Renew of the steel duct with protection against oxidation (galva) .
- Dimension are 300 x 500 mm (small side) to 500 x 500 mm (large side)
- Steel plate of 4 mm
- Reassembly with insulation between the aluminium walkway structure and the duct to prevent galvanic corrosion.
- Installation of a new register (supplied by GENAVIR).

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Bridge Fresh air duct renewal		Per unit	1.0

List of attachments:

- 1) VC 36_E - Ventilation Timonerie Décompression Pont E.pdf, 7.73 MB
- 2) VC 40_C - Extraction et Prises d'air Pont E.pdf, 3.56 MB

Images:

(Images start on next page)



To be executed by: Yard

Description:

- Cutting out the current tape
- Identical production in the workshop
- Welding on site
- Painting will be carried out by the crew

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Paint shop ventilation duct renewal		Per unit	1.0

Images:



To be executed by: Yard, Specialist

Surveyed by: Class, Owner's representative

Description:

Relative to ITEM A3-001 & A3-002

We consider that a 2m x 2m breach will be necessary in the HVAC room (starboard bow).

- Preparing and securing the environment
- Cutting of the hull according to the plans provided in the appendix
- The breach will remain open while the old equipment is evacuated and the new equipment loaded.
- Plan to close the breach as soon as possible once the new equipment has been installed in the vessel.
- Restore the room to its original state

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Breach opening, closing & painting		Per unit	1.0

Images:



To be executed by: Yard

Surveyed by: Owner's representative

**Description:
plan AC6-3.1**

- Remove the outrigger jacks
- Check the dimensions of the stainless steel runners and replace them.
- 316L stainless steel horizontal shoes (314x200x10mm)
- 316L stainless steel vertical skids (335x200x10mm)
- Cleaning and painting of the rectangular boxes and the Bd and Td brackets and check the condition of the guides will be done by crew as per international specifications
- Re-installation of all these elements once refurbished.

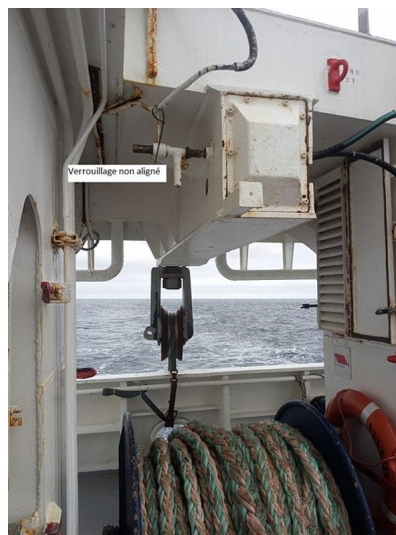
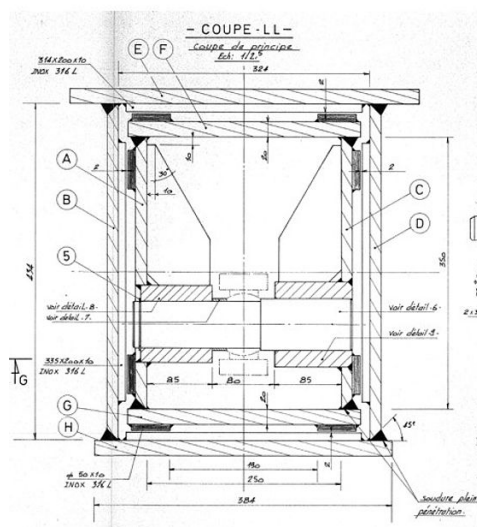
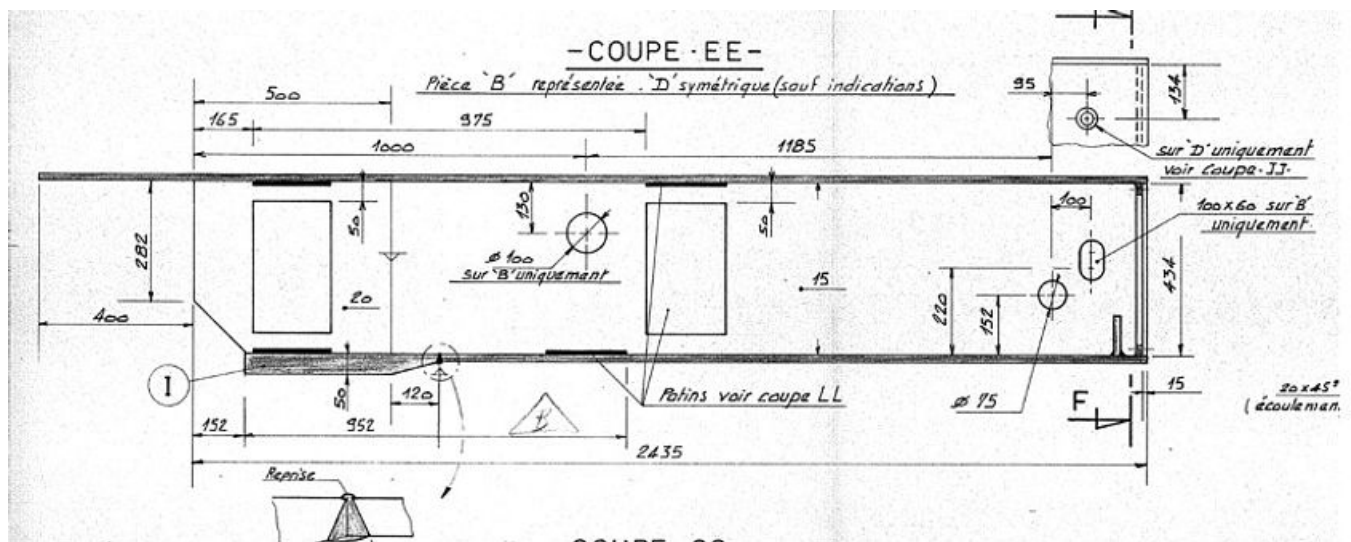
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Handling to workshop/ to vessel after works		Per unit	2.0
Hot repair works		Per unit	2.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

All equipment shall be inspected by owner's representatives before reassembly.

Electrical works shall be performed by competent electrical workshop or contractors.

Bearings are owner's supply except if the contrary is stipulated in the specification.

Greasing or oiling of the bearings will be carried out by the shipyard before commissioning.

The overhaul consists, for each electric motor, in the following specification:

- Removal – check of insulation
- Complete overhaul in workshop
- Cleaning
- Bearings Replacement (supplied by GENAVIR)
- De greasing
- High pressure washing with hot water
- Drying
- Brushing as necessary
- Application of a layer of paint supplied by shipyard (same color)
- Refit
- Alignment
- Trials
- Check of insulation after refit
- Cleaning and balancing of fans when applicable

Report shall include the insulation values before and after the visit, the detail of parts replaced and the work carried out. Observations on the condition of the motor before refurbishment may be provided.

Note:

In case of devices that should be inspected both mechanically and electrically:

- The electrical motor should be removed first by the electrical work company.
- The reassembling of the motor on board, after the overhaul, and the lining should be done by the electrical work company.

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

- List of attachments:**
- 1) EL 16-1_E - Position des Découpes pour Gaines Electriques.pdf, 2.75 MB

2) EL 16-2_N - Plans de Détail des Passages Gaines Electriques.pdf, 5.11 MB

3) EL 2_B - Ensemble des Tableaux Electriques - Nomenclature des Tableaux.pdf, 282 KB

4) EL 2_C - Ensemble des Tableaux Electriques.pdf, 9.84 MB

To be executed by: Yard

Description:

Needs creation of an access on bulkhead of laboratory deck B

ebm-papst Mulfingen motors

Maker's type: G4D180-FF20-01

New access is quoted in G.007

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
extraction fan on laboratory deck B visit		Per unit	1.0

E.002_STARBOARD Electric motor for 132 kw hydraulic pump (E.002 optionnal)

To be executed by: Yard

Description:

Access works must be quoted

Hydraulic store deck B_starboard

BF4 315 MA 6 4. IM2002. S/N 942612015. 1480rpm

NB: 820 kg

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Access works		Per unit	1.0
STARBOARD Electric motor for 132 kw hydraulic pump visit		Per unit	1.0

To be executed by: Yard

Description:
CF. attached picture

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Hydraulic local supply fan visit		Per unit	1.0

Images:
(Images start on next page)

Composant Parent	Code TM	Composant TM	Marque	Type	SN	Rendement (IE)	Couplage	Tension d'utilisation	Puissance (unité)	Vitesse	Intensité	Cos Phi	Type de service	Protection	Poids	Température Environnement	Roulement CA	Roulement COA
Pompe eau brute arriere		Moteur Elec. Ppe eau brute arriere	AEG	AM 280 SV4	26613452		Δ/Y	380V/660V	75KW	1480 rpm	141/81A	0,85				CLASS B		
Ventilateur extraction local dechet		Moteur Elec. Ventil. extract. local dechet	ebm	G2E160-AD01-01				230V	270/300W		1,18/1,3					CLASS B	6001 2RS1	608 2RS1
Ventilateur soufflage local Hydraulique		Moteur Elec. Ventil. souffl. local Hydraulique	ABB	MBT 132 MC-4/6	S0913P1 6S3/1		Y	380V	5,9/2,2 Kw	1445/955 rpm	14/ 6 A	0,8 / 0,76				CLASS B	6208 22/C3	6206 22/C3

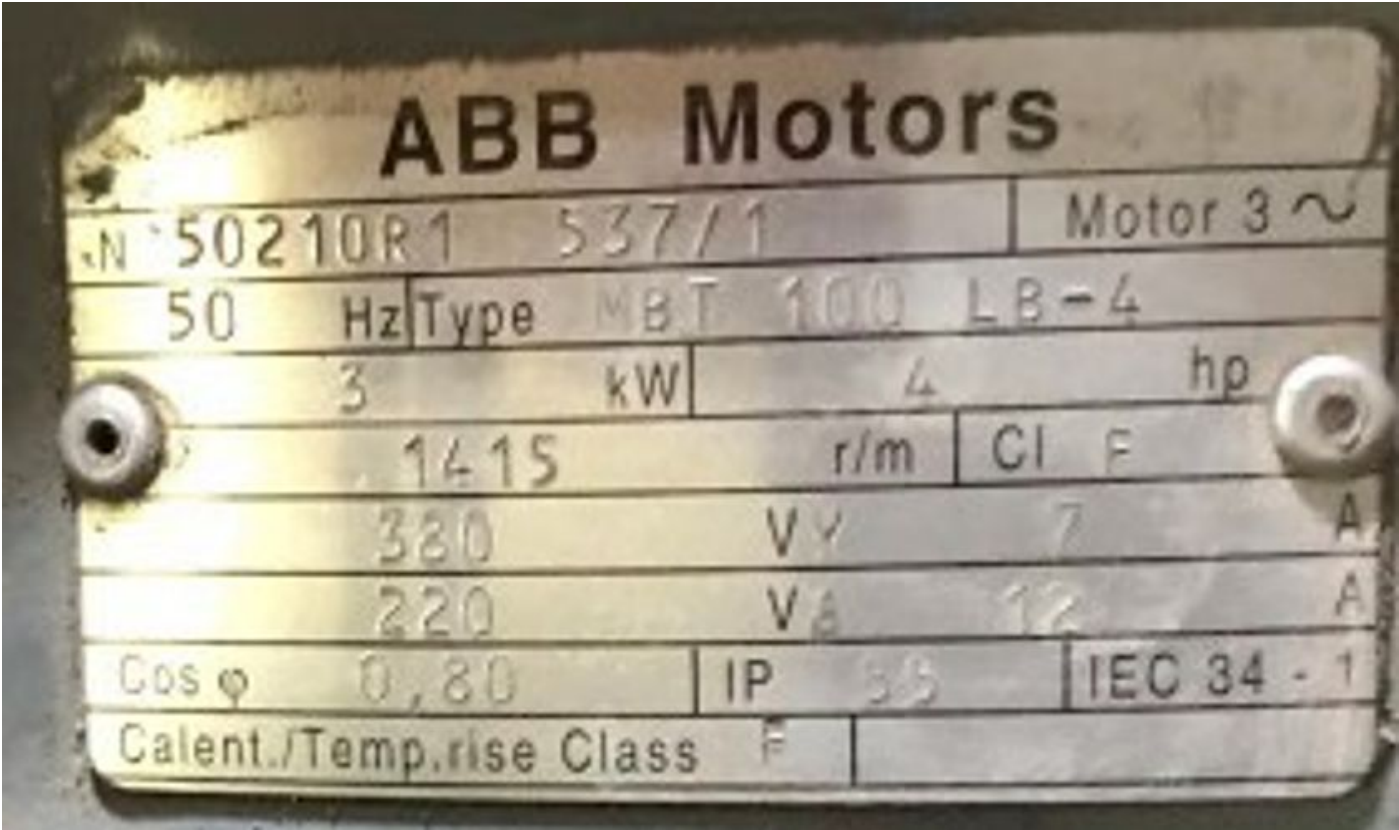
To be executed by: Yard

Description:
ABB Solyvent Ventec BZ 100 3 16 VAS MR fan, 25000 m3/h
ABB MOTORS motor type MBT 132 MD4, 1450 rpm
Power: 9.2 kW
Location: in starboard hydraulic room

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Electric Local Supply Fan visit		Per unit	1.0

Images:



To be executed by: Yard

Description:
CF.photo

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Electric Local ExhaustFan visit		Per unit	1.0

Images:



To be executed by: Yard

Description:
CF. Attached photo

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Aft General Cooling 450 m3/h electric motor visit		Per unit	1.0

Images:
(Images start on next page)

Composant Parent	Code TM	Composant TM	Marque	Type	SN	Rendement (IE)	Couplage	Tension d'utilisation	Puissance (unité)	Vitesse	Intensité	Cos Phi	Type de service	Protection	Poids	Température Environnement	Roulement CA	Roulement COA
Pompe eau brute arriere		Moteur Elec. Ppe eau brute arriere	AEG	AM 280 SV4	26613452		Δ/Y	380V/660V	75KW	1480 rpm	141/81A	0,85				CLASS B		
Ventilateur extraction local dechet		Moteur Elec. Ventil. extract. local dechet	ebm	G2E160-AD01-01				230V	270/300W		1,18/1,3					CLASS B	6001 2RS1	608 2RS1
Ventilateur soufflage local Hydraulique		Moteur Elec. Ventil. souffl. local Hydraulique	ABB	M8T 132 MC-4/6	S0913P1 653/1		Y	380V	5,9/2,2 Kw	1445/955 rpm	14/ 6 A	0,8 / 0,76				CLASS B	6208 22/C3	6206 22/C3

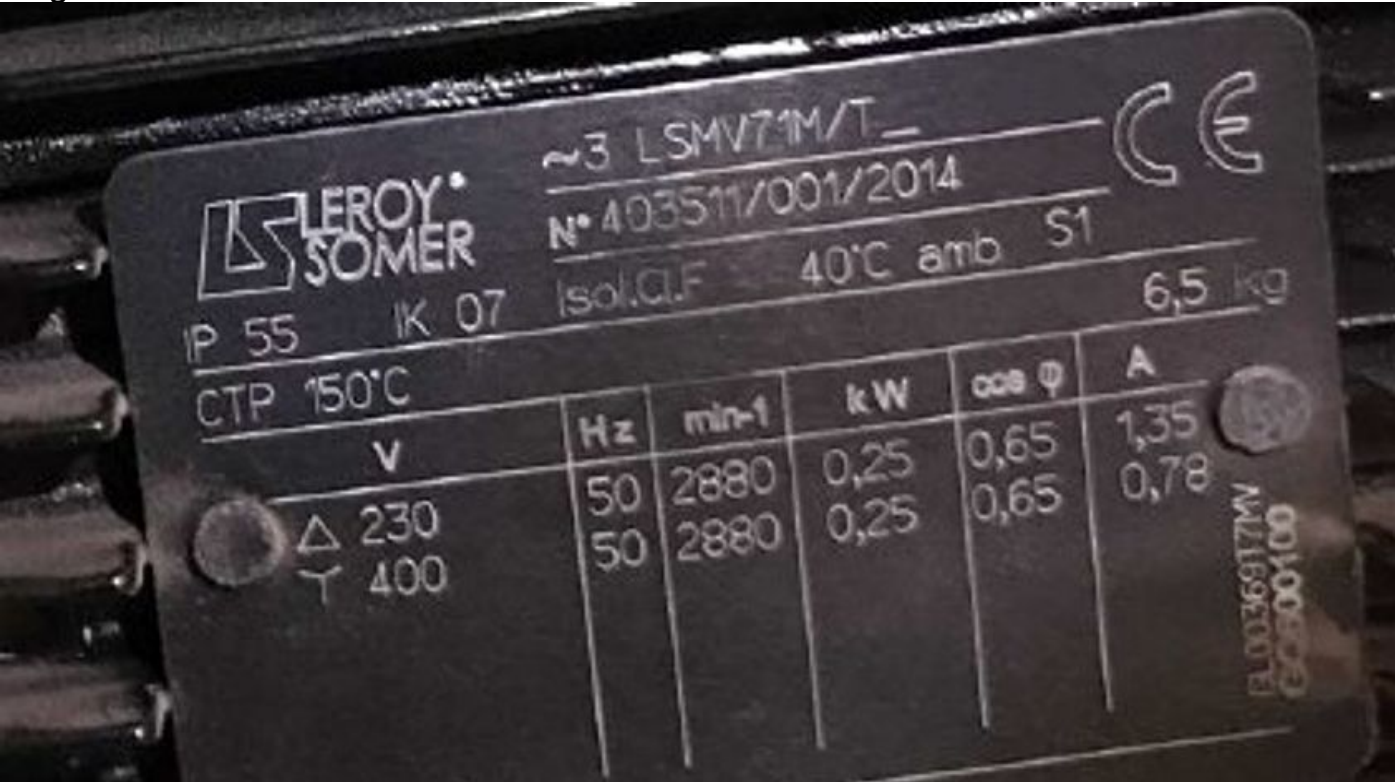
To be executed by: Yard

Description:
Cf.photo

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Sanitary deck B & C exhaust fan visit		Per unit	1.0

Images:



To be executed by: Yard

Description:

AEG engine type : AM 160 LO4 Q4 , 1470 rpm

Power rating: 13.2 kW

Location: U-shaped passageway Td front section

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
80 m3/h Sea Water electric motor visit		Per unit	1.0

To be executed by: Yard

Description:

AEG motor Type: AM 160 L04 - Q4 13.20 kW 1460 rpm

Serial number: 46412964

deck A portside under stairs to cold rooms

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fishing lab inferior bilge pump ELEC.MOTOR visit		Per unit	1.0

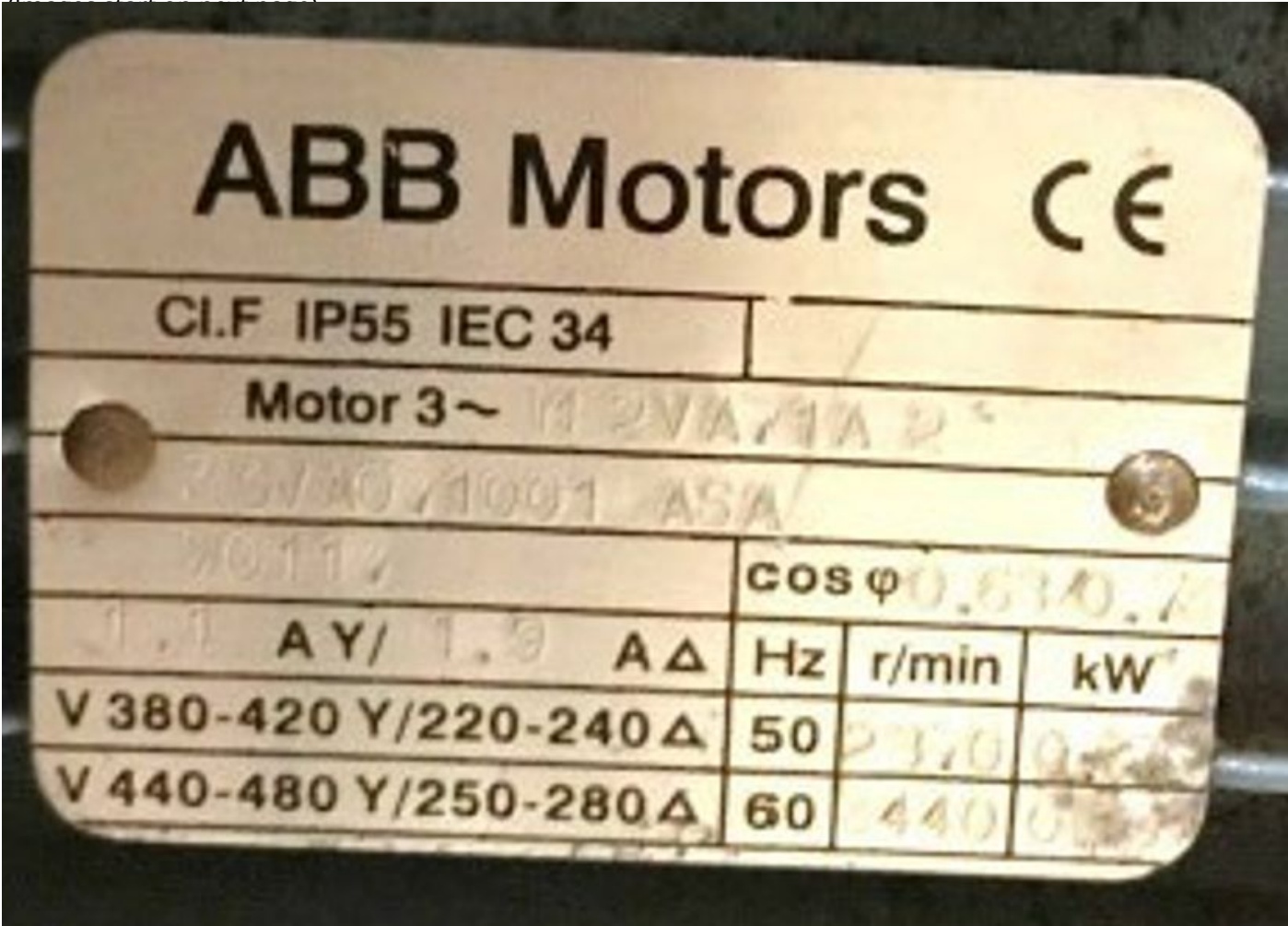
To be executed by: Yard

Description:
Cf.Photo

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Liquid provision store electric motor visit		Per unit	1.0

Images:



To be executed by: Yard

Description:

Fan CDV Type : BSZ 280 RMF 1700 m3/h

Motor ABB MOTORS Type : MT 80 B 19 F 165 - 2 1.1 kW 2850 rpm

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Laundry exhaust fan visit		Per unit	1.0

To be executed by: Yard

Description:
CF.attached photo

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment plant local exhaust fan visit		Per unit	1.0

Images:

Composant Parent	Code TM	Composant TM	Marque	Type	SN	Rendement (IE)	Couplage	Tension d'utilisation	Puissance (unité)	Vitesse	Intensité	Cos Phi	Type de service	Protection	Poids	Température Environnement	Roulement CA	Roulement COA
Pompe eau brute arriere		Moteur Elec. Ppe eau brute arriere	AEG	AM 280 SV4	26613452		Δ/Y	380V/660V	75KW	1480 rpm	141/81A	0,85				CLASS B		
Ventilateur extraction local dechet		Moteur Elec. Ventil. extract. local dechet	ebm	G2E160-AD01-01				230V	270/300W		1,18/1,3					CLASS B	6001 2RS1	608 2RS1
Ventilateur soufflage local Hydraulique		Moteur Elec. Ventil. souffl. local Hydraulique	ABB	MBT 132 MC-4/6	S0913P1 653/1		Y	380V	5,9/2,2 Kw	1445/955 rpm	14/ 6 A	0,8 / 0,76				CLASS B	6208 22/C3	6206 22/C3

To be executed by: Yard

Surveyed by: Owner's representative

Material supply by: Yard, Owner

Description:

Motor reference :

Make: ABB Motors; Type: HXT 355 MA 4V1W; No.: 3261234 0934 XM

Ins. Cl. F ; IP : 23S

Voltage : 380 V ; Frequency : 50 Hz ; Power : 440 kW ; Speed : 1486 rpm

Current : 84 A ; Cos ϕ : 0.82 ; Weight : 1350 kg

Bearings: CA 6322/C3 ; COA 6319/C3

The ship repair yard will include:

- Escape hatch opening (1m/1m).
- Electric motor disconnected and handled for workshop visit.
- Complete inspection of the motor. Varnishing if necessary.
- NB It remains to be seen whether this type of motor can be converted with sealed bearings (this motor has only run for 3222 hours since new) to avoid the need of grease.
- The owner will supply the sealed bearings where applicable, the original new bearings if they are kept.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

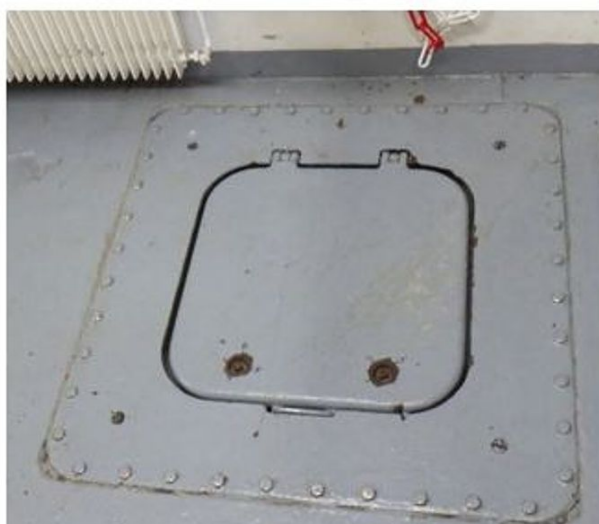
Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
Handling to workshop/ to vessel after works		Per unit	1.0
Bow thruster Electric motor complete overhaul		Per unit	1.0

List of attachments:

1) AC 7-53_A - Panneau REP 1 Pont B Propulseur.pdf, 1.91 MB

Images:

(Images start on next page)



To be executed by: Yard

Description:

Relative to sheet metal work D.013

- Installation of lighting
- Connection to the nearest 220V switchboard
- Installation of a switch from the forward peak store

The lights and switch are supplied by GENAVIR

Cables and electrical components supplied by the ship repair yard

- Updating of the vessel's electrical plans following the modification

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
New Chain Pit Lightning installation		Per unit	1.0
Updating electrical plans		Per unit	1.0

List of attachments:

- 1) Plan tableaux pont A avant.odg, 208 KB
- 2) Plan tableaux pont B.odg, 408 KB
- 3) Plan tableaux pont C.odg, 346 KB

To be executed by: Specialist

Surveyed by: Owner's representative

Material supply by: Contractor

Description:

For information only

The maintenance of the electric propulsion motor and drives will be done by GENERAL ELECTRIC. GE will be directly contracted by GENAVIR.

The Shipyard is not involved in the works at this stage. If some assistance to GENERAL ELECTRIC technicians is required, this will be quoted onsite.

The Shipyard agree to allow GENERAL ELECTRIC technicians to access to the vessel.

This upgrade needs Harbour and Sea Trials for completion, that shall be included in the trials planning.

2 Days have to be considered for HAT, and 2 days for Sea Trials.

To be executed by: Yard

Surveyed by: Owner's representative

Description:

Références:

- EG2_Leroy Somer LSA50.2 VL10 sn: 340513/2
- EG3_Leroy Somer LSA50.2 VL10 sn: 340513/1

When dismantling the brackets, you will need to change the antifriction bearings, the "O" ring seal, the preloading (wavy) washer and adhesive paste.

New bearings are supplied by GENAVIR.

The "O" ring seal, the preloading (wavy) washer and adhesive paste are supplied by shipyard.

Follow the procedure for dismantling reassembly

- Replace the DE bearing
- Replace the NDE bearing

Coupling and alignement are required

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

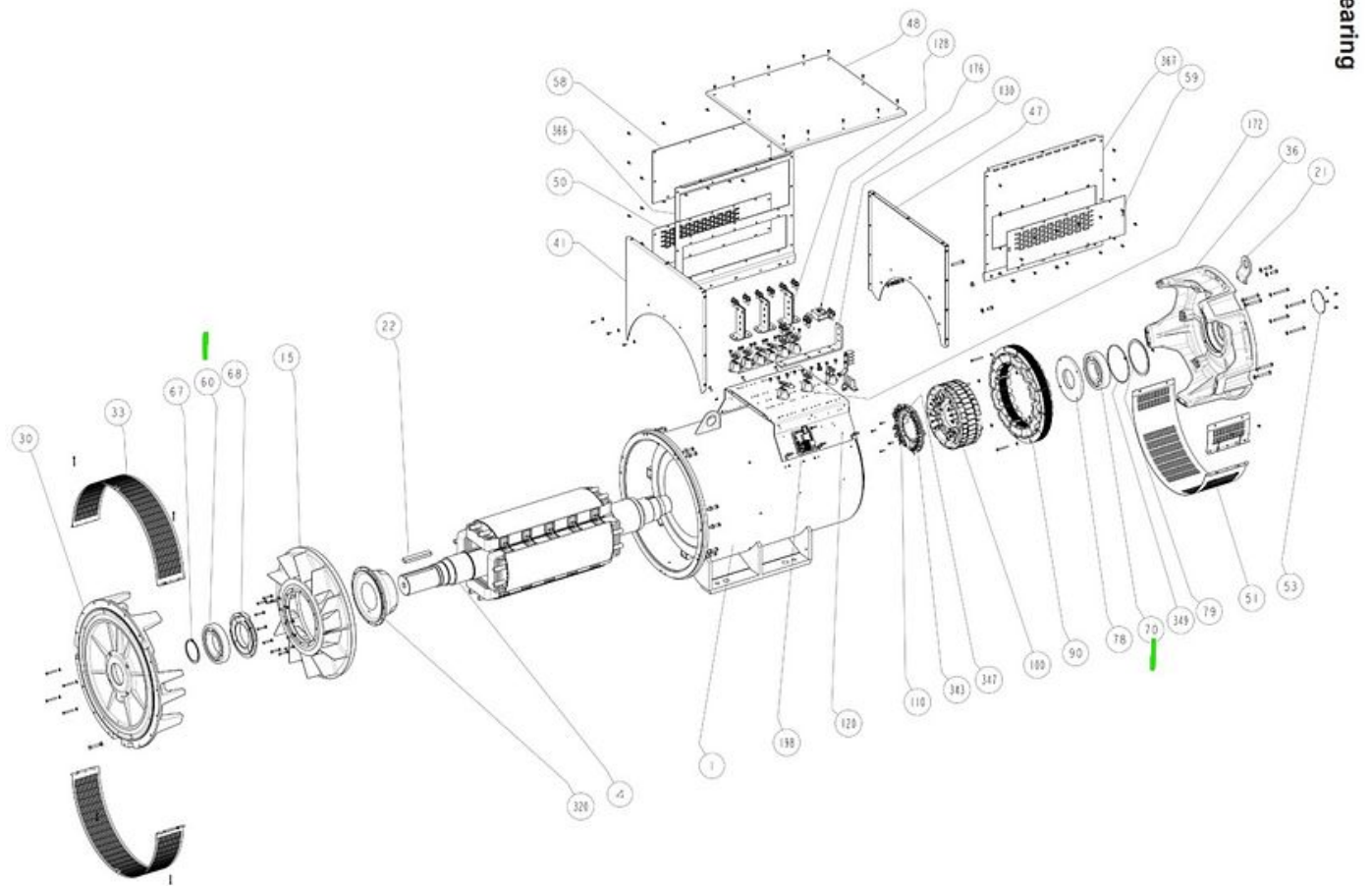
Name	Description	Quote type	Quantity
Alternators bearing replacement		Per unit	2.0

List of attachments:

- 1) LSA50.2 VL10 Alternator maintenance manual.pdf, 2.48 MB
- 2) LSA50.2 VL10 specification.pdf, 3.79 MB

Images:

(Images start on next page)



To be executed by: Yard

Description:

A closing system based on the release of an electromagnet must be installed on E deck (G.005) and on C deck for the cafeteria door.

2 Electrical cables shall be laid from deck F to deck E and deck C by using technical ducts on 6 and 14 meters.

Electric cable characteristics are : MPRX 3G 1.5

The cable will be provided by the ship's crew.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Cable routing from deck F to deck E (6 meters)		Per unit	1.0
Cable routing from deck F to deck C (14 meters)		Per unit	1.0

To be executed by: Yard

Surveyed by: Class, Owner's representative

Material supply by: Yard, Owner

Description:

According to new electrical drawings conducted by Barillec in summer 2023

2141230-202 - E - MAJ alimentation tableau DA

2141230-401-C - MAJ alimentation tableau DA

2141230-41- C - MAJ Alimentation tableau DA

- Removal of the 24V battery and charger
- Lay an electrical cable from the 220V regulated switchboard to under the parquet flooring in the generator room. Length to be provided +/- 25m
- Replacement by a 230v regulated / 24V power supply in the motor panels.
- Use of 230/24V regulated and 24V AUT as back-up.
- Addition of an automatic circuit selector (diode or other) which switches automatically if there is a lack of voltage when one of the power sources is lost.
- Addition of a 24V Permanent Insulation monitor

NB: Electrical drawings are available in the attached documents (already BV validated)

Equipment and supplies provided by the shipyard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

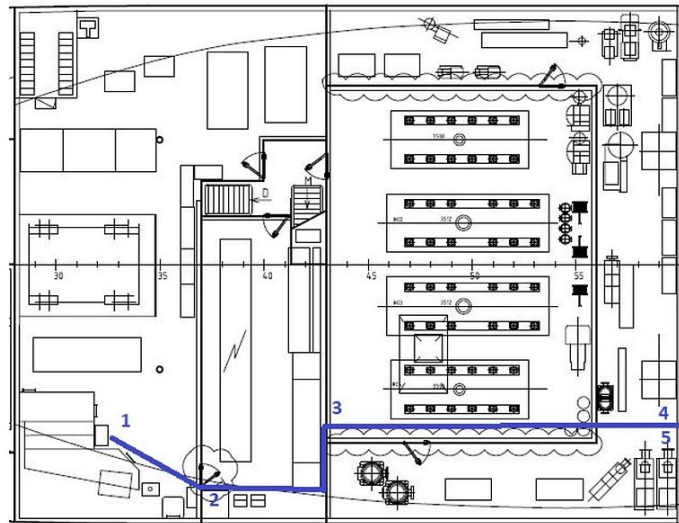
Name	Description	Quote type	Quantity
Caterpillar sensors 24V supply modification		Per unit	4.0

List of attachments:

- 1) 2141230-202 - E - MAJ alimentation tableau DA.PDF, 2.55 MB
- 2) 2141230-401-C - MAJ alimentation tableau DA.PDF.PDF, 518 KB
- 3) 2141230-41- C - MAJ Alimentation tableau DA.PDF, 448 KB

Images:

(Images start on next page)



E.001 – 24V CATERPILLAR SENSORS SUPPLY MODIFICATION

According to new electrical drawings conducted by Barillec in summer 2023

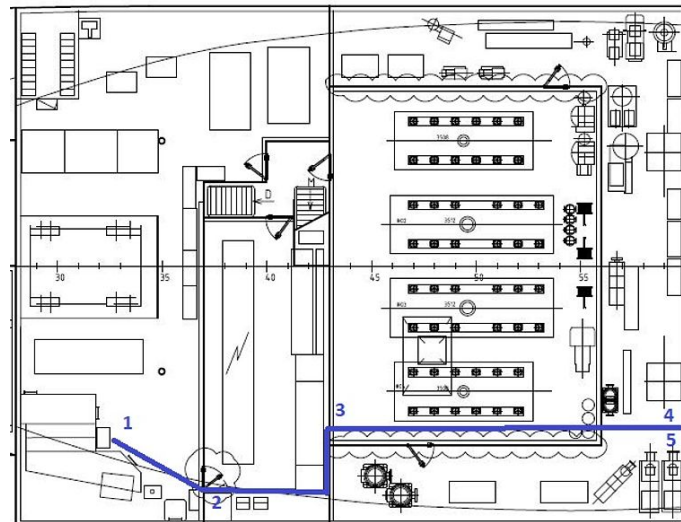
- ❖ 2141230-202 - E - MAJ alimentation tableau DA
- ❖ 2141230-401-C - MAJ alimentation tableau DA
- ❖ 2141230-41- C - MAJ Alimentation tableau DA

- Removal of the 24V battery and charger
- Run an electrical cable from the 220V regulated switchboard to under the parquet flooring in the generator room. Length to be provided +/- 25m
- Replacement by a 230v regulated / 24V power supply in the motor panels.
- Use of 230/24V regulated and 24V AUT as back-up.
- Addition of an automatic circuit selector (diode or other) which switches automatically if there is a lack of voltage when one of the power sources is lost.
- Addition of a 24V Permanent Insulation monitor

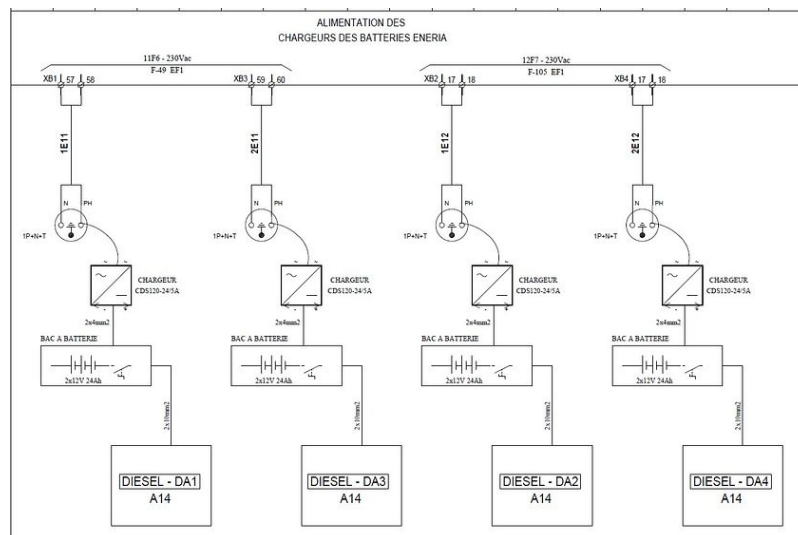
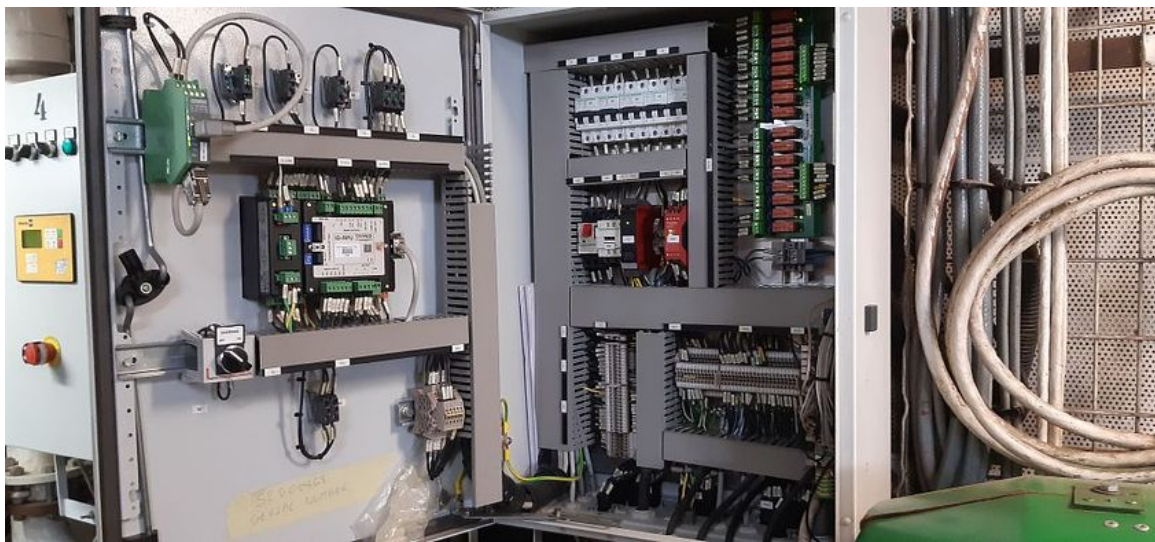
NB: Electrical drawings are available in the attached documents

Equipment and supplies provided by the shipyard

Fixed price..... €







To be executed by: Yard

Description:

Ethernet lines between patch panel and the different labs and outside need to be checked with appropriate equipment and full report of the testing campaign has to be checked. See table attached.

The electronic engineer of the vessel will decide which sockets has to be replaced based on the report.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Inspection and report	per line	Per unit	1.0
Supply and instalation of new ethernet socket		Per unit	1.0

List of attachments:

1) Ethernet cables to be checked.xlsx, 1.94 MB

Permanent instalation of IT cable from engine control unit to network socket

To be executed by: Yard

Description:

For testing, a cable has been pulled from the engine control unit SNC22 in the shelf C4 to the network socket A1203 in the engine control room. This cable need to be replaced by a proper cat 7 lszh cable passing under the floor to reach the socket. See picture attached.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Supply of cat7 LSZH cable and termination		Per unit	1.0
installation of cable		Per unit	1.0

Images:

(Images start on next page)

Permanent installation of IT cable from engine control unit to network socket



To be executed by: Yard

Description:

The cable from the VHF in the wheelhouse (starboard aft of deck F) to the antenna in the mast (see mast plan attached) need to be replaced by a longer cable in order to move the antenna. The cable need to be LMR400 or rg213 cable.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Supply cable rg213 or lmr400 and termination		Per unit	1.0
installation of cable		Per unit	1.0

List of attachments:

1) TL6418_PA-plan_antennes-D.pdf, 851 KB

To be executed by: Yard

Description:

For the installation of the new tv system.

- 4 LMR400 cables need to be installed from the fleet antenna (nr 1 in "TL6418_PA-plan_antennes-D" to the portside aft racks of the wheelhouse.
- 2 Cable LMR400 need to be installed from the portside aft racks of the wheelhouse, 1 to the "salon equipage" and 1 to the "salon officier"

Crane might be needed during 3h for removal of fleet antenna and installation of the new antenna (max 200kg)

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
installation of cable		Per unit	1.0
Supply of LMR 400 cable and termination		Per unit	1.0
crane work		Per unit	1.0

To be executed by: Yard

Description:

4 Pairs of OM4 fiber optic need to be installed from the IT room ("zone informatique") to the starboard aft racks in the wheelhouse with patch panel on both sides. Test and report will be produced to insure installation has been done correctly.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Supply of om4 fiber and termination		Per unit	1.0
installation of cable		Per unit	1.0
Testing and report		Per unit	1.0

To be executed by: Yard

Description:
9 junction boxes need to be replaced (see picture in "Junction boxes to be replaced.7z")
Yard has to provide and install new boxes including placing the cables back in the boxes.
Junction boxes provided have to be weather proof and uv resistant and pass through must allow easy cable installation with connector on cable (ie existing solution), model has to be validated by Genavir prior installation.

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Supply junction boxes		Per unit	1.0
Junction boxes installation		Per unit	1.0

List of attachments:
1) Junction boxes to be replaced.7z, 1.59 MB

To be executed by: Yard

Surveyed by: Specialist, Owner's representative

Material supply by: Owner

Description:

The owner will contract a paint supplier representative.

The paint supplier representative will report directly to the owner.

Any change on the scope of works or in the specification that could be suggested by the paint supplier representative shall be confirmed by the owner.

An inspection onsite shall be performed before proceeding to painting works. The yard shall issue a paint protocol that shall be agreed and signed by all parties before proceeding. The paint protocol shall confirm the areas and the paint specification.

The yard may quote the work described below, based on the maker's Technical Specification attached (if in doubt for quoting, maker's technical specification will prevail)

All costs for each coat and all additional charges such as scaffolding, crane & cherry pickers, surcharges for anti-fouling, removal and disposal of tin based residues and empty paint drums shall be included.

Prices shall include the cleaning and disposal of all blasting grit from the decks, accommodation and dry dock on completion of blasting.

Port holes, vent openings and transducers shall be protected by yard before blasting.

Transducer protecting covers are provided by the owner, and will be fitted under supervision of the owner's electronics representatives.

Surface preparation is to be considered according to standard ISO 8501-4. If sand blasting is not possible, Hydro blasting could be considered with spots edges mechanical softening.

Following reports shall be provided :

- Daily progress report for hull treatment
- Weather condition for hull treatment, in particular the outside temperature
- Dew point on various locations of the area to be paint
- Steel temperature on various location of the area to be paint
- Steel condition / surface preparation with pictures
- Wet and dry thickness measurements on various location of the area to be painted. Film thickness must be controlled after each coat.
- For ballast tanks and areas in contact with sea water : Salt test result (minimum 3 per tank)

Important note: All works performed on or near scientific equipment and transducers shall be done with great care. Owners representatives (ETO or SPDT) shall be advised before proceeding.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

List of attachments:

- 1) 24-190-100-GENAVIR-THALASSA-Mesures d'épaisseurs.pdf, 2.04 MB
- 2) PL 04_C - Plan des Formes.pdf, 10.5 MB
- 3) PL 05_Q - Plan des Capacités.pdf, 9.22 MB
- 4) PL 11 - Caractéristiques des capacités.pdf, 1.34 MB
- 5) TU 29_D - PL 11 - Sorties au Bordé.pdf, 2.78 MB
- 6) TU 59 - Nable de Coque pour Capacités Combustible et Huile seulement.pdf, 82 KB
- 7) TU 60 - Nable de Coque pour Ballasts Eau douce Mer Puisards Cofferdams.pdf, 101 KB

To be executed by: Yard

Description:

General painting work under the floor of the forward tunnel
Thickness measurements have been already performed and found within class standards.

Paint treatment as per Maker's paint specification.
Floor steel plates removal/refitting for access is included

Area 10 m2

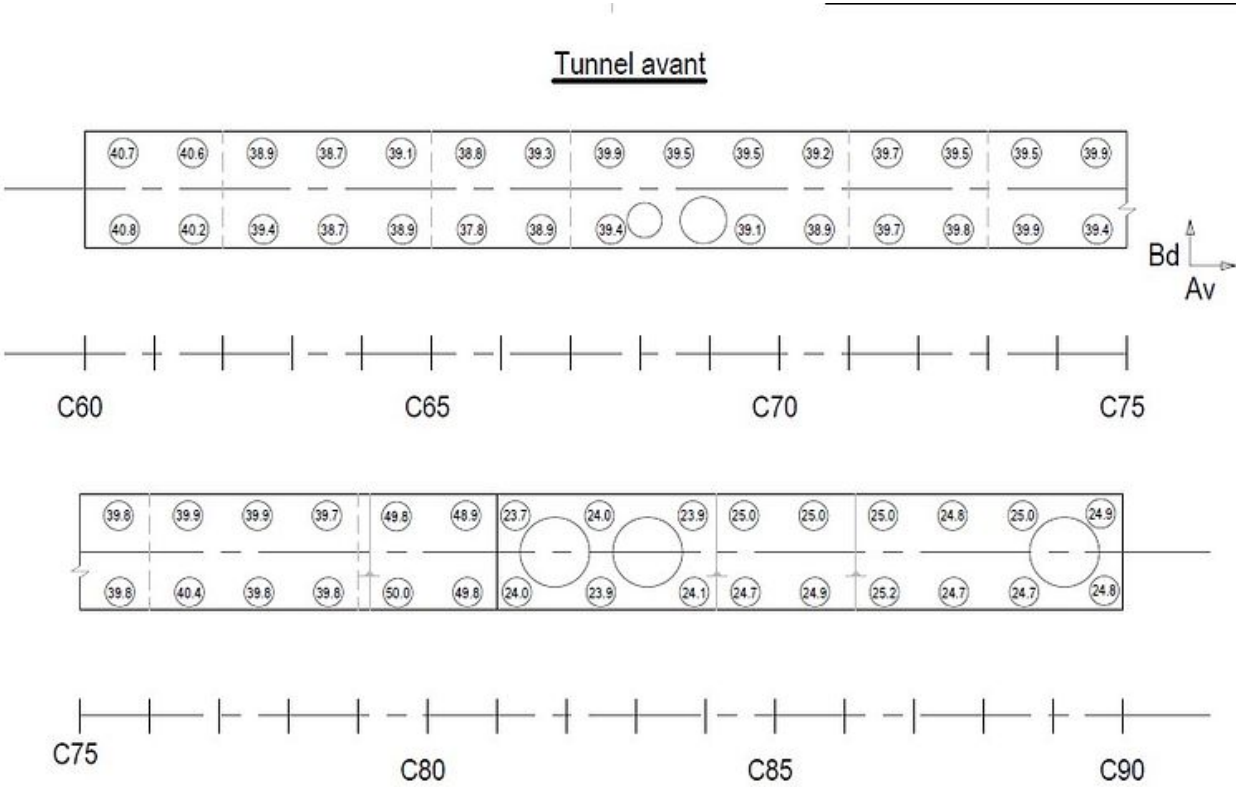
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment of the forward tunnel		Per unit	1.0

Images:

(Images start on next page)



paissieur d'origine

To be executed by: Yard

Description:

General painting work under the floor of the U-shaped passageway
Thickness measurements have been already performed and found within class standards.

Paint treatment as per Maker's paint specification.
Floor steel plates removal/refitting for access is included

The new supports for the manholes and access (ITEM D.003) will have to be included in the scoop of this work.
Area 55 m2

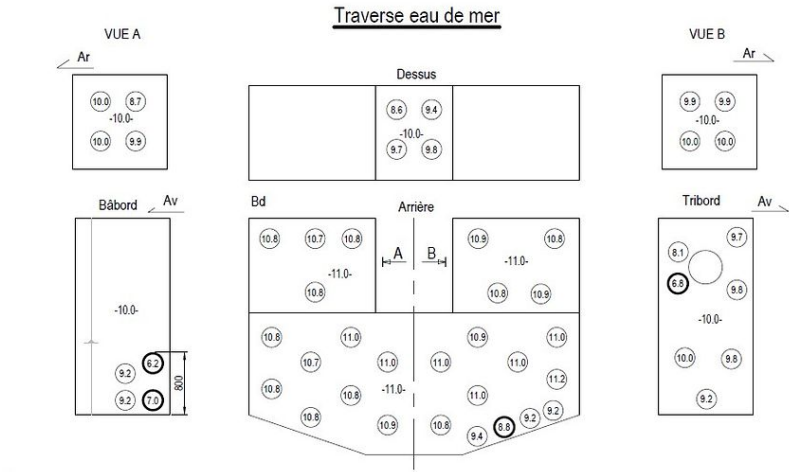
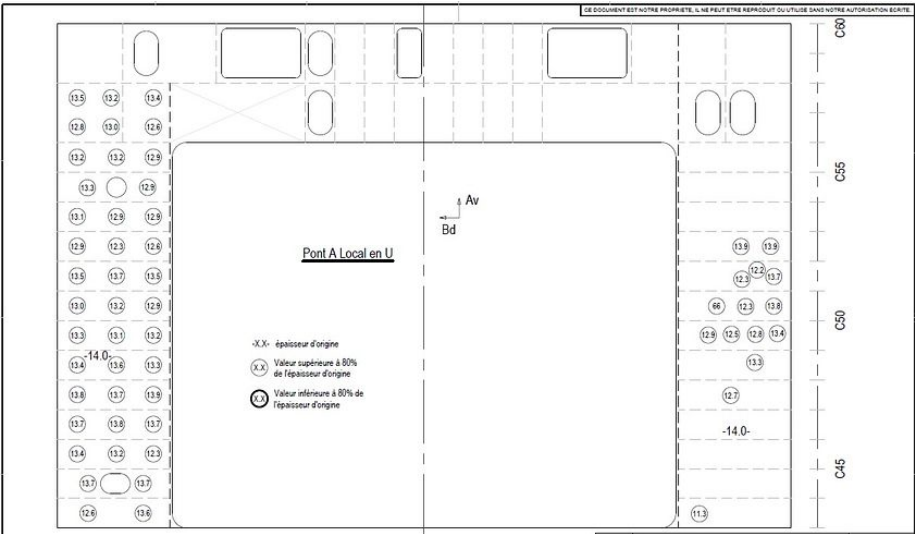
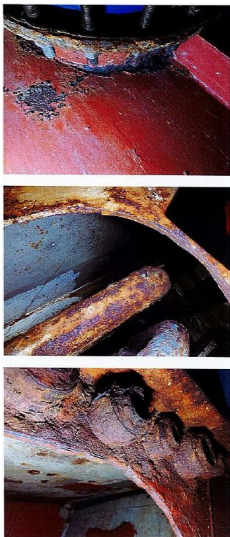
Cost items, yard:

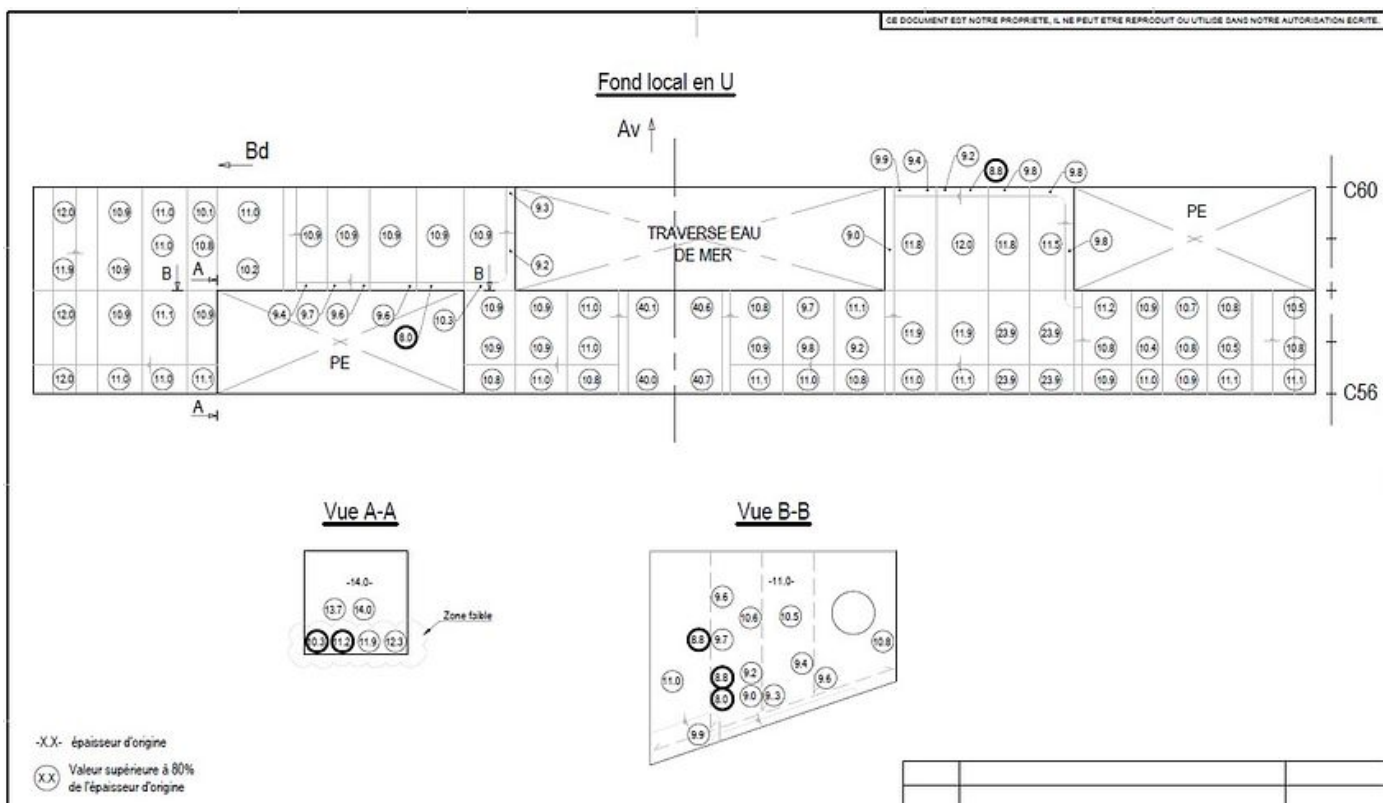
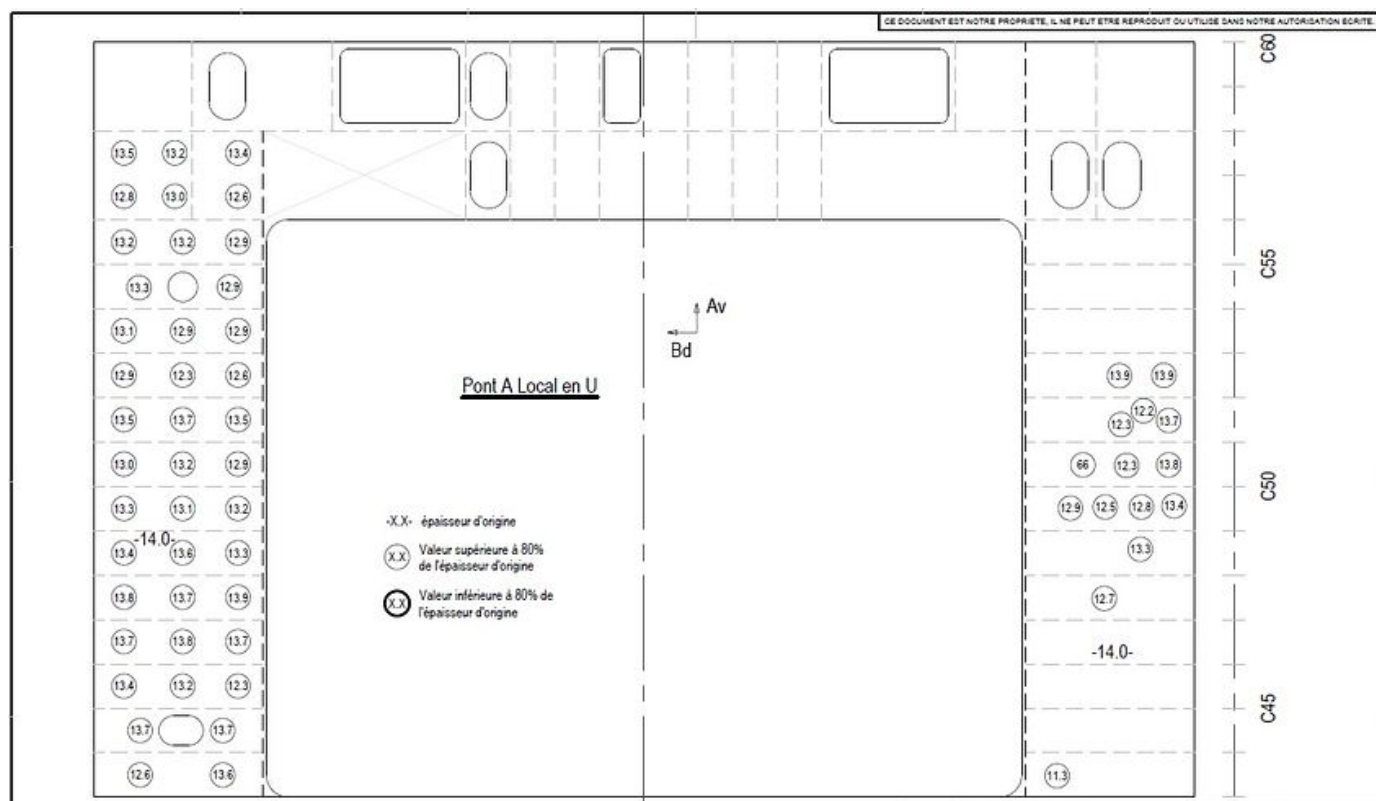
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment under parquet flooring U-shaped passageway		Per unit	1.0

Images:

(Images start on next page)





To be executed by: Yard

Description:

General painting work under the floor of the Engine room bilge

Thickness measurements have been already performed and found within class standards.

Paint treatment as per Maker's paint specification.

Floor steel plates removal/refitting for access is included

Area 30 m2

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment Under Engine Room		Per unit	1.0

To be executed by: Yard

Description:
Thickness measurements have been already performed and found within class standards.

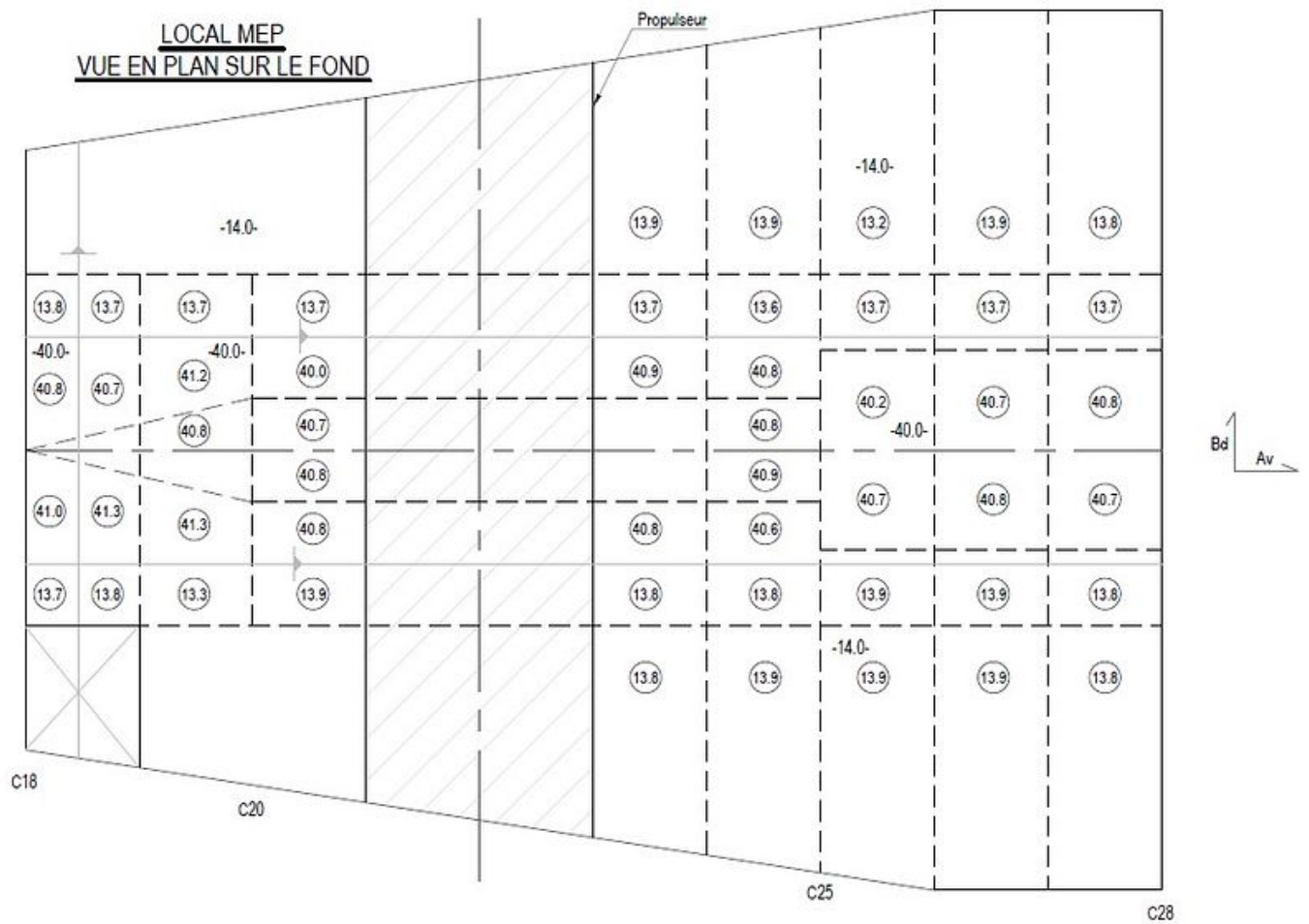
Paint treatment as per Maker's paint specification.
Floor steel plates removal/refitting for access is included

Area 25 m2

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment under EPM room		Per unit	1.0

Images:
(Images start on next page)



To be executed by: Yard

Description:

General paintingwork under the access of the scientific cold rooms
Thickness measurements have been already performed and found within class standards.

Paint treatment as per Maker's paint specification.
Floor steel plates removal/refitting for access is included

Area 4 m2

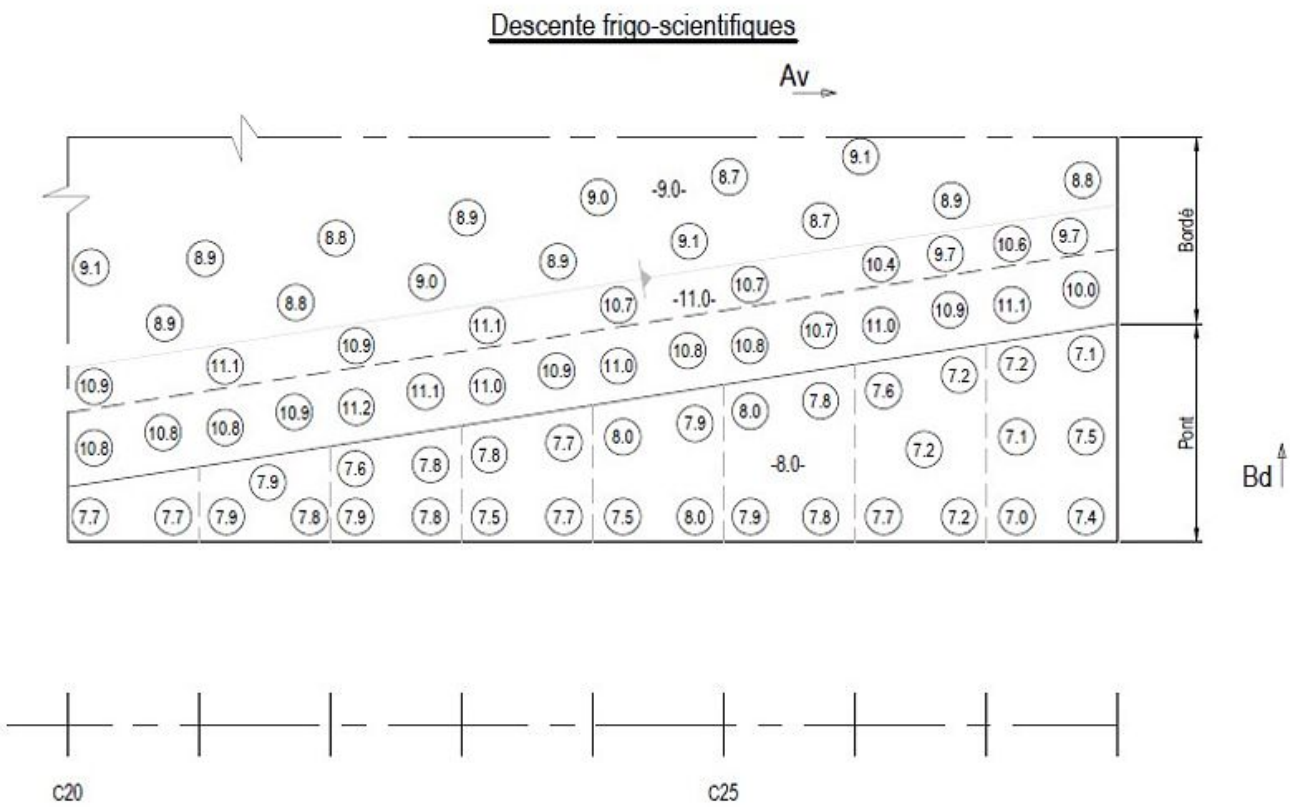
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment under access to scientific cold room		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

General paintingwork under the EG platform

Thickness measurements have been already performed and found within class standards.

Paint treatment as per Maker's paint specification.

Floor steel plates removal/refitting for access is included

Area 20 m2

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Treatment under EG platform		Per unit	1.0

To be executed by: Yard

Description:

Paintwork according to international specifications

-Bottom grinding ST2.

-Painting system according to international specifications

-Cleaning and painting system on bottoms only

Estimated surface 6 m2

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
dry mesh cockle treatment		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

Paintwork to international specifications
The starboard dry mesh is located at Couple 39 to C 43 in the MEP room on deck A.

Estimated surface 4 m2

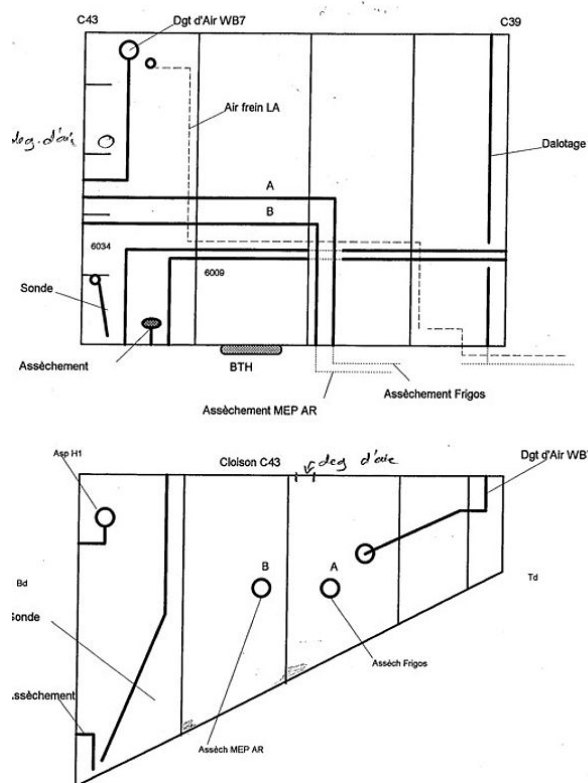
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Starboard Dry mesh treatment		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

To be quoted :

- Pipes draining performed by the crew
- Dismantling the pipes and cable tray. Work shall be done without disconnecting the cables, and they must be properly secured / protected to avoid any damages.
- **Treatment of corroded areas on vessel structure 5 m2**
- Replacement of damaged pipes and supports :

Quote for P265GH steel pipe 2.9mm thick ø60.3 12 linear meters

Supply of flat flange DN50 ø60,3 PN40 X4

Manufacture of the pipework according to the existing system

Pointing and welding using process 141

Quote for 14 collars according to the existing system

- Painting of all pipes in accordance with international specifications : 20 linear meters ø60.3
- Painting of support : T/U ST3 + 3 coats
- Refitting

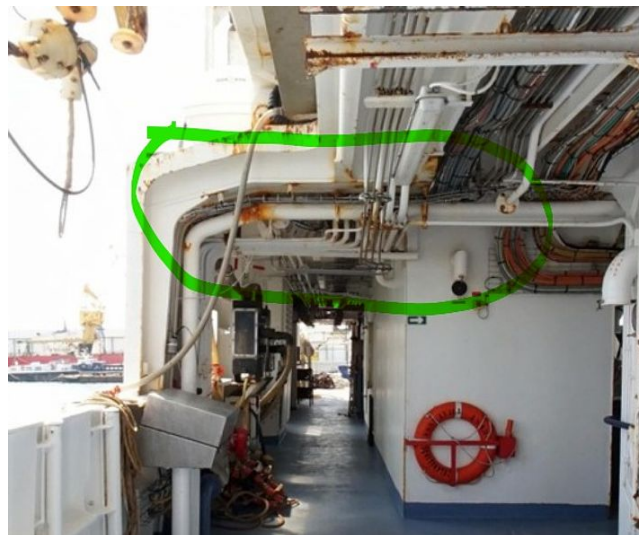
Cost items, yard:

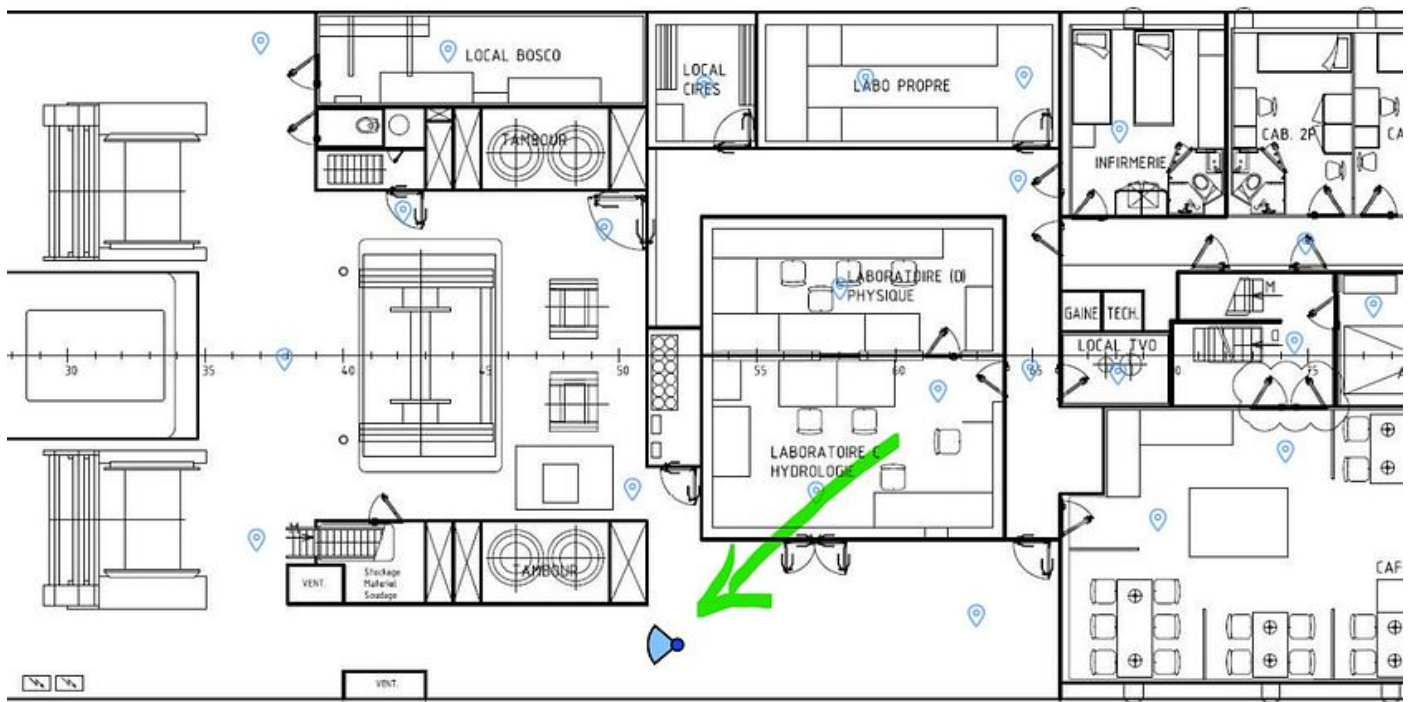
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
technical solution to improve area protection_Design and production		Per unit	1.0
Treatment of the structural parts of the vessel and supports		Per unit	1.0
Pipes removal/reinstall		Per unit	1.0
Pipes painting job as per international specification		Per unit	1.0

Images:

(Images start on next page)





To be executed by: Yard

Material supply by: Yard, Owner

Description:

- Oil circuits sealed with safety plugs
- Complete dismantling
- Sandblasting of all spare parts
- Painting in accordance with the international system specified in the paint specifications
- Replacement of all screws and bolts from yard
- Reassembly
- Reconnection
- Sea trials

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Complete sanding and painting following A5.006		Per unit	1.0

F.011_Aft Aframe complete Overhaul////Complete painting renewalF.011

To be executed by: Yard

Description:

A-frame without fittings:

Surface area: 60 m2

100% Degreasing and HP washing

- Paint as per International specification

Nota Bene : Side winch CMU 10T

- Power tooling ST3
- Paint treatment as per international specifications
- Replacement of screws supplied by yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Side winch CMU 10T painting job		Per unit	1.0
A-frame without fittings and after repair painting job		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

- Sandblasting
- Paint treatment as per international specifications

Item relative to A5.007

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Both winch painting job		Per unit	2.0

Images:



To be executed by: Yard

Description:

As a reminder:

Preparatory work:

- Dismantling aluminium shelving racks
- Remove the evaporator, copper pipes and electric cables
- Secure the gas and electricity supplies
- Removal of the existing layer in the room

Checking work:

- Removal of the wooden cleats
- Check the integrity of the condition of the metal sheeting
- Depending on the condition of the metal frame:

-----Paint treatment of the sheet metal or replacement if needed----

Prepare a quotation for full sandblasting and full paint treatment to international "INTERZONE 954" specifications. (2 layers)

Laminating surface

Floor: 12.25m2.

Ceiling: 12.25m2.

Partitions (4): 10.5 m2 x 2 and 12 m2 x 2.

Total: +/- 70m2

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Paint work relative to G.003		Per unit	1.0

To be executed by: Yard

Description:

Anchors and chains painted black as per INTERNATIONAL specification
The ship's crew will mark the links.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Chains and anchor black painting		Per unit	1.0

To be executed by: Yard

Description:

Paintwork to international specifications in the following 2 seawater ballasts:

- EM2
- EM6

Position on the ship and access are available in the appendices.

Scaffolding, hosing down, residue treatment, venting and heating if requested shall be included as a lumpsum price.

- Works as per International specification

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

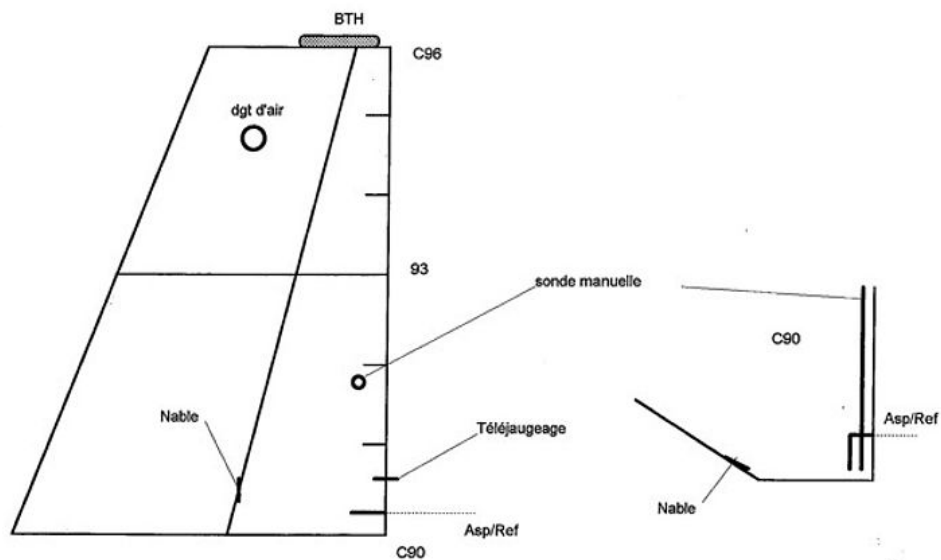
Name	Description	Quote type	Quantity
Sea Water ballast N°2		Per unit	1.0
Sea Water ballast N°6		Per unit	1.0

Images:

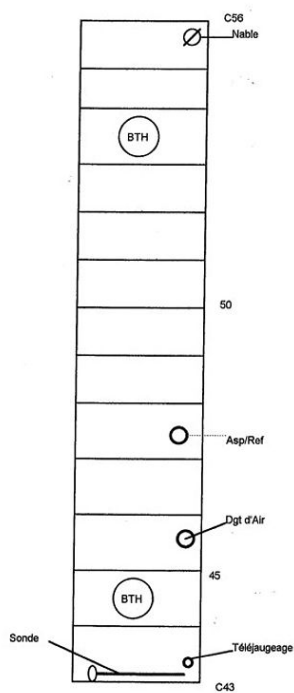
(Images start on next page)

WB 2 EAU DE MER 19,17 m3 du C90 au C96

15/06/95



WB 6 EAU DE MER 6,9 m3 du C43 au C56 03/95



To be executed by: Yard

Description:

Following repairs to the D.014 sheet metal section
Paint treatment in accordance with the international specifications

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Sea Water ballast n°1 access & Top painting		Per unit	1.0

Images:



To be executed by: Yard

Description:

- Paint treatment as per INTERNATIONAL specifications

Scaffolding, hosing down, residue treatment, venting and heating if requested shall be included as a lumpsum price.

Volume 29 m3

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Complete sanding and treatment U1 tank		Per unit	1.0

List of attachments:

1) PL 05_Q - Plan des Capacités.pdf, 9.22 MB

To be executed by: Yard

Description:

- Protection of sensitive environmental elements
- Treatment of sheet metal and structural elements
- Surface preparation to international specifications
- Paint treatment to international specifications

Surface to be treated 4m2

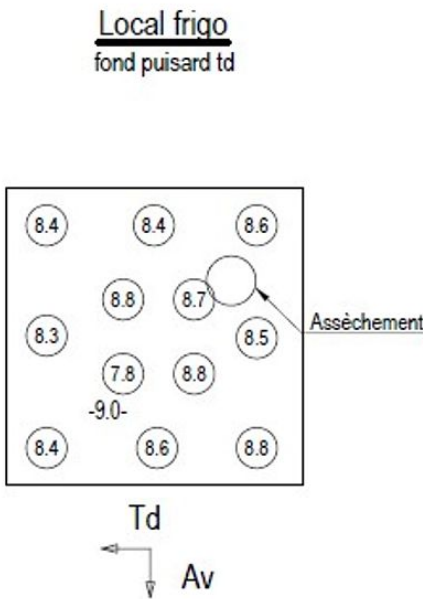
Depending on the state of the surface once preparation has been completed, the superintendent will decide whether to initiate a thickness measurement campaign, which may result in additional work being carried out

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Port sump of the fishing laboratory		Per unit	1.0

Images:



To be executed by: Yard

Description:

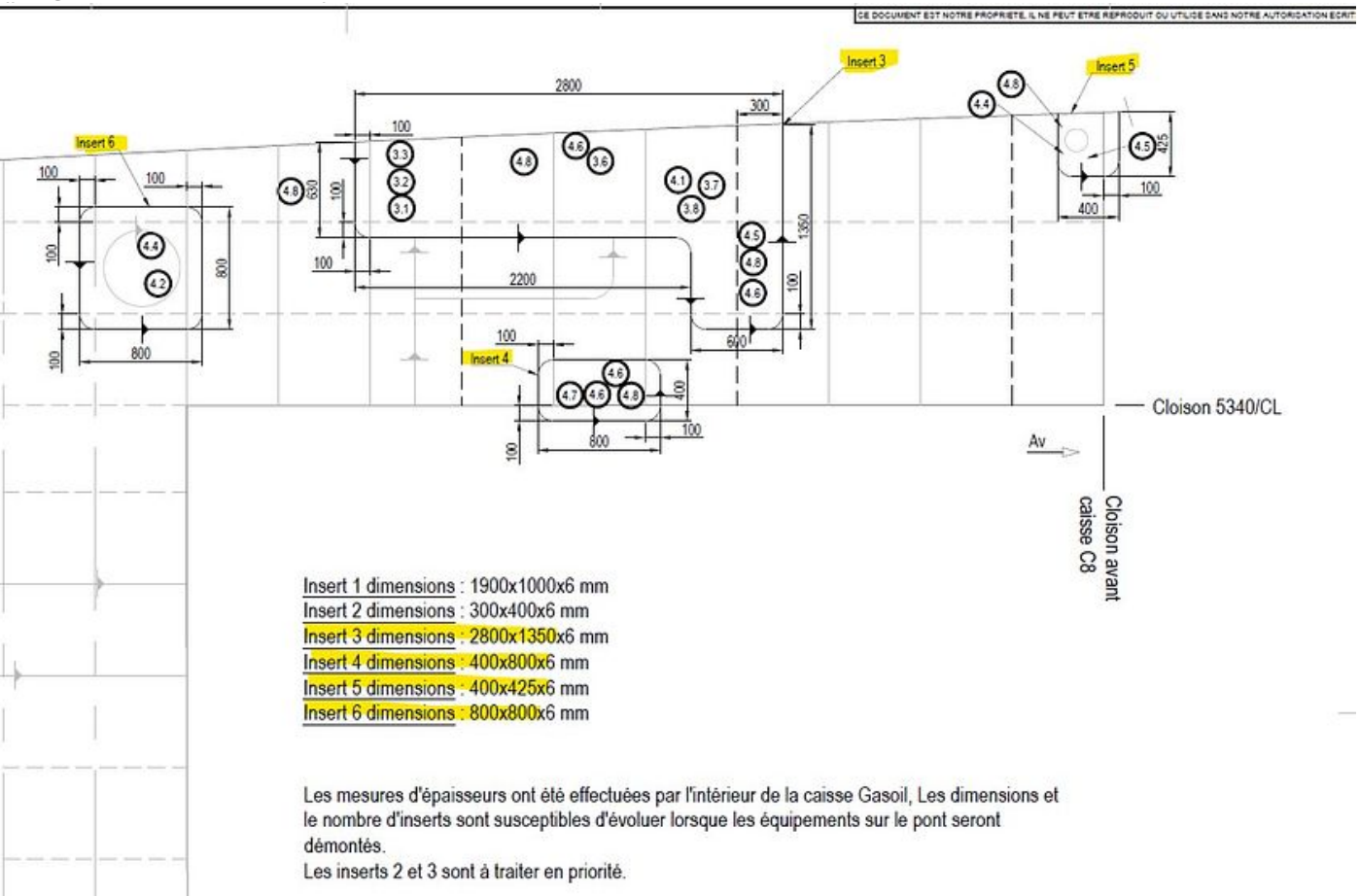
Following repairs to the front of the C8 ballast ceiling around the waste disposal area.
Painting to international specifications on new sheet metal.
Surface +/- 8 m2

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fishery Floor after repair on portside		Per unit	1.0

Images:



To be executed by: Yard

Description:

- Complete dismantling
- sandblasting
- rebuilding of metal rollers
- Replace steel if needed in supports
- paint treatment as per international specifications

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fishing winch rollers painting job		Per unit	2.0
Fishing winch rollers reloading of steel		Per unit	4.0

Images:



To be executed by: Yard

Description:

NB: Sheet metal work on the port bow and dismantling of the covers / jacks of the transverse thruster tunnel before painting work.

The height due to the block arrangement shall be considered.

Surface area: 1470 m2 -

including sea chest and grids, BECKER rudder, transverse thruster tunnels, port/starboard forward tunnel closing covers, gondola, anti-roll plates, forward transverse fairing

Boundaring line included

Scuppers included

Anodes and propellers protections included

- HP Washing after undocking (150 bars) - washing of all valves outlets shall be done with great care.

-Paint as per International specification

HULL MARKS

surface area: 10 m2 -

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Sea Chest and grids		Per unit	1.0
Quotation for cleaning of Hull appendages		Per unit	1.0
Plugging all scuppers to avoid water leakages on the areas to be painted.		Per unit	1.0
Protection of the propeller's blades and hub from blasting and painting.		Per unit	1.0
Protection and de-protection	All bridge windows and about 70 windows and portholes have to be considered. 200 meters of Handrail protections shall be fitted to avoid any overspray on deck. Access included.	Per unit	1.0
Flat & Bottom sides - 10%TU + 1FC		Per unit	1.0
Hull marks		Per unit	1.0

List of attachments:

- 1) AC 21_H - Marques sur Coque.pdf, 1.07 MB
- 2) AC 22_A - Hublots Visualisation Hélice.pdf, 749 KB
- 3) CM 01_N (2-2) - Structure Générale Elévations.pdf, 1.69 MB
- 4) CM 01_P (1-2) - Structure Générale Pont A à Pont F.pdf, 6.77 MB
- 5) ED474-1000-PL 01-1_V - Plan d'Ensemble - Vues en Plan.pdf, 1.48 MB

To be executed by: Yard

Description:

Tarpaulins, windows and handrails protections shall be included in a lumpsum basis

(UP TO E DECK) EXISTING WHITE PARTS

Surface area: 600 m2 - including portholes, fairleads, freeing ports, etc.

- Washing

-Painting according to INTERNATIONAL specifications.

(UP TO DECK E) EXISTING BLUE PARTS

Surface area: 500 m2 - including portholes, skimmer outlets, vacuum waste outlets, roller fairleads, fender strips, unloading ports, etc.

- Washing

- After checking cleanliness and drying, applications in accordance with INTERNATIONAL specifications.

(UP TO DECK E) EXISTING YELLOW PARTS

Surface area: 90 m2 - including hawsepipes, fenders, etc...

- Washing

- After checking cleanliness and drying, applications in accordance with INTERNATIONAL specifications.

LOGOS on top side X 2 (portside and starboard side)

If logos are not tag-welded. Logos shall be protected when painting the topside and repainted after works completion.

"FLOTTE OCEANOGRAPHIQUE FRANCAISE PAR L'IFREMER"

" Name of the vessel : THALASSA"

- Washing

- After checking cleanliness and drying, applications in accordance with INTERNATIONAL specifications.

GENAVIR's new logo

- □Remove the existing painted sheet steel logos from the chimneys
- □Laying the sheet metal flat
- □Make the new shipowner's logo in 5 mm thick sheet steel, max. height 1800 mm, max. width 2000 mm.
- □Weld the new logo supports to the chimneys using the same fastening system as the existing one.
- □Weld the new logo to the chimneys

Apply a red and blue paint system as indicated in the international specifications.

SUPERSTRUCTURES up to the end of mast

Surface area: 10 m2

- Degreasing, HP washing and SSPC-SP3 or Pt2 or St2 diskling

- Mechanical preparation by 30% dismantling

- Washing

- After checking cleanliness and drying, applications according to INTERNATIONAL specifications.

Cost items, yard:

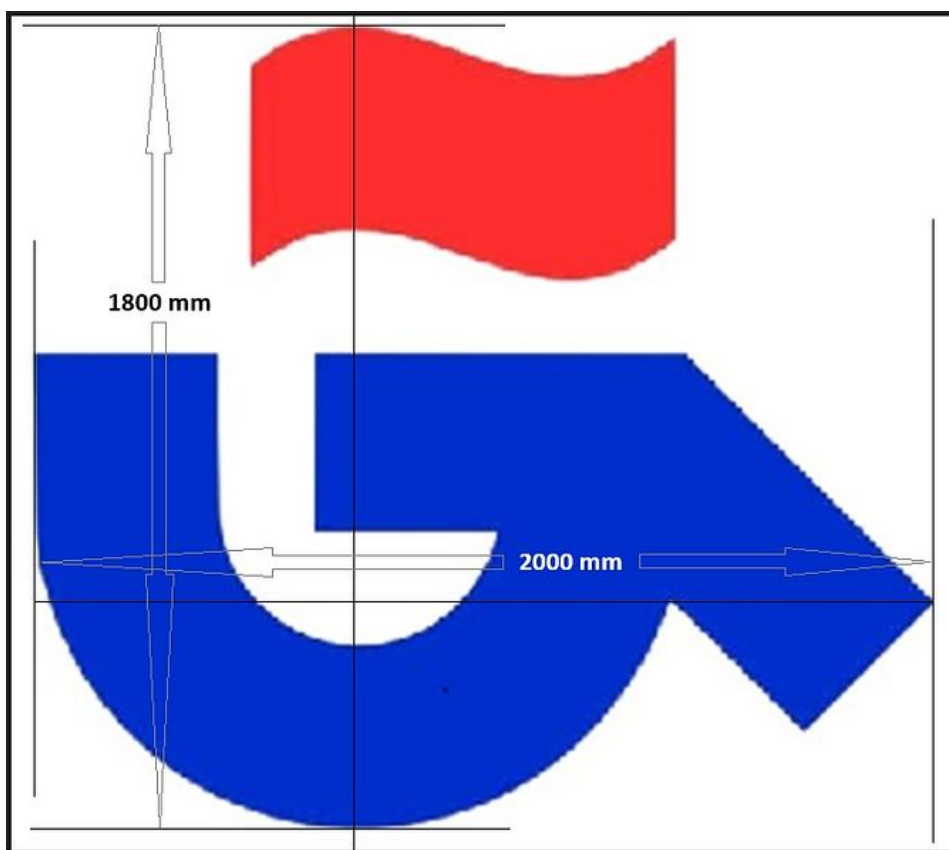
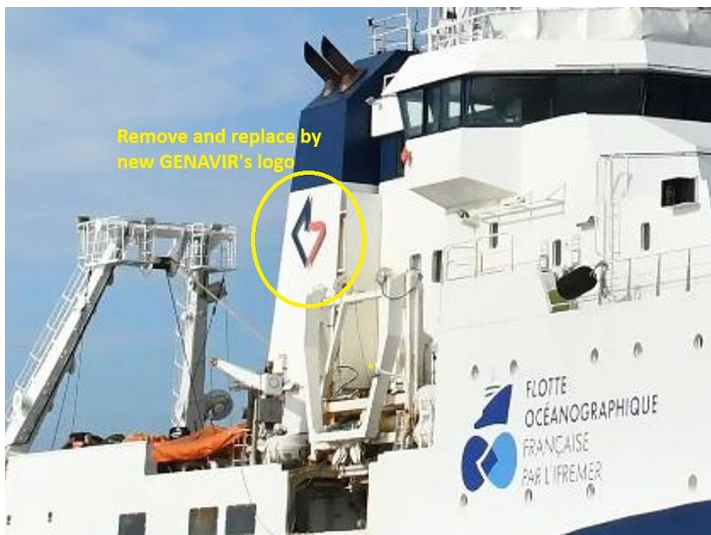
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Superstructure painting job		Per unit	1.0
White, Blue and Yellow Top Side - 10%TU + 1FC		Per unit	1.0
Not tag-welded logos		Per unit	1.0
Welded logos (Forwars vessel's name)		Per unit	1.0

GENAVIR's New Logo		Per unit	1.0
--------------------	--	----------	-----

List of attachments:

1) AC 7-3_F - Répartition et Nomenclature des Hublots et Fenêtres.pdf, 14.5 MB

Images:

To be executed by: Yard

Description:

All areas outside the vessel shall be washed with fresh water after docking, from top deck to the main deck

Areas that have not been repainted shall be degreased when necessary and cleaned with high pressure. Attention shall be paid to electrical panels, electrical cables, junction boxes, hydraulic hoses and deck equipment to avoid any damage or water ingress.

Access included

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fresh water washing		Per unit	1.0

To be executed by: Yard

Description:

All works shall be performed as per maker's recommendation and procedures, if any.

Documentation and drawings are available onboard. It is the shipyard responsibility to request all documents needed to perform the works properly and safely.

All works shall be performed as per BV rules, the best industry practices and the relevant regulation.

NDT, Welder and material certificates shall be provided as per class requirements

Protection and Cleaning of works surrounding area shall be done and included in the offer.

Fire watch and permits are included on a lumpsum basis when necessary.

Sufficient ventilation shall be provided by yard and included in the offer.

Access works, handling, lifting and staging are included on a lumpsum basis when necessary.

Transport to workshop is included when necessary.

Scrapped equipment and material disposal is of the yard responsibility and included in the offer, except if the contrary is clearly stipulated.

A detailed report is to be provided for all works.

Asbestos free certificates shall be provided for gaskets and new ceilings upon request.

Tools are provided by yard when works are done under yard responsibility.

Grease and lubricant shall be applied when required (owner supply)

Coolants, Lubricating and Hydraulic oil draining and refilling is done by crew when requested. New Oil and coolant are owner's supply.

Verification of correct operation after reassembly and any necessary running-in test will be conducted by crew as per GENAVIR procedure. Works will be considered as finish only if trials are completed and validated by both parties.

For Accommodations, furniture is supplied by Yard, except if the contrary is stipulated.

Colour and material shall be agreed with the Owner before ordering.

Furniture removal / refitting shall be included in the offer when deemed.

Prices shall include a thorough cleaning of all areas after works.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

To be executed by: Yard, Specialist

Description:

The work consists of:

- closing the current access door to the meat room by rebuilding an insulating partition with Bureau Veritas-approved injected foam.
- Creating access to the meat room via the current -40°C tunnel, which would become the SAS entrance to this cold room.

The ship repair yard therefore needs to provide a quotation for:

- Removing the door, evacuating it and rebuilding the bulkhead.
- Removal of the evaporator from the tunnel freezer
- Disposing of old shelf structures
- Shut off the pipework and power supply to the tunnel running through the meat chamber
- Cutting out the bulkhead
- Finishing the cut-out to arrive at a definitive solution for the new configuration.
- The layout of this space would consist of two sections of shelves 30 to 40cm deep, in line with current sanitary standards supplied by shipyard , on the forward and starboard bulkheads.
- Fitting plastic curtains to isolate the meat chamber from its airlock.(The special plastic slats will be supplied by shipyard)
- Moving the light switch in the new airlock for meat room

Cost items, yard:

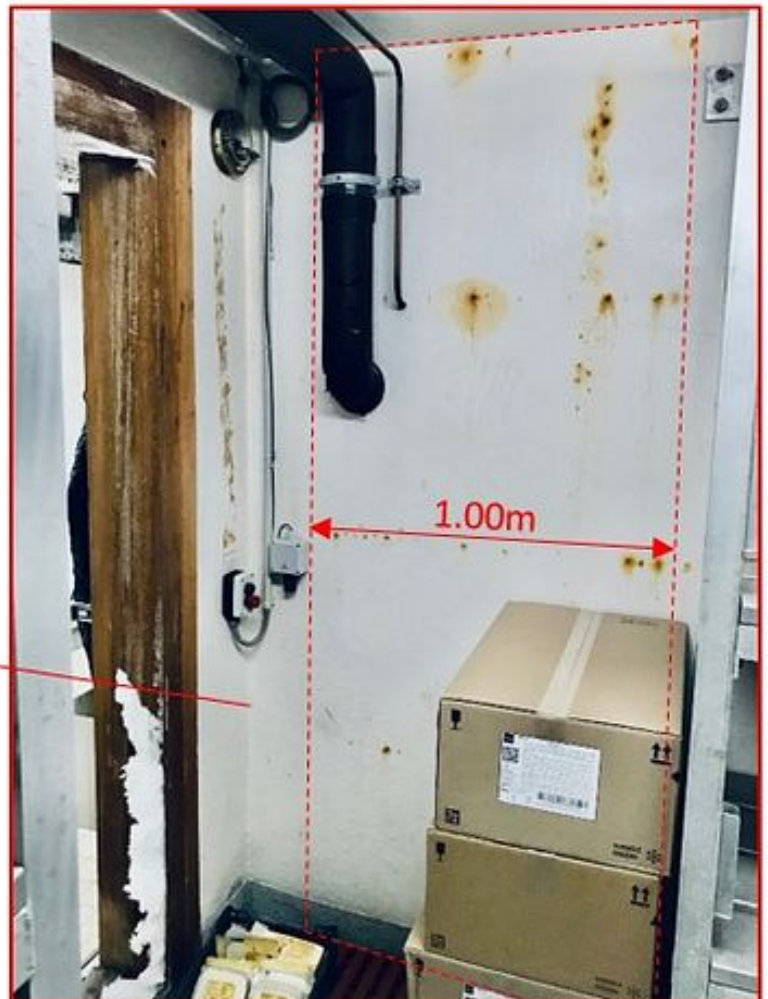
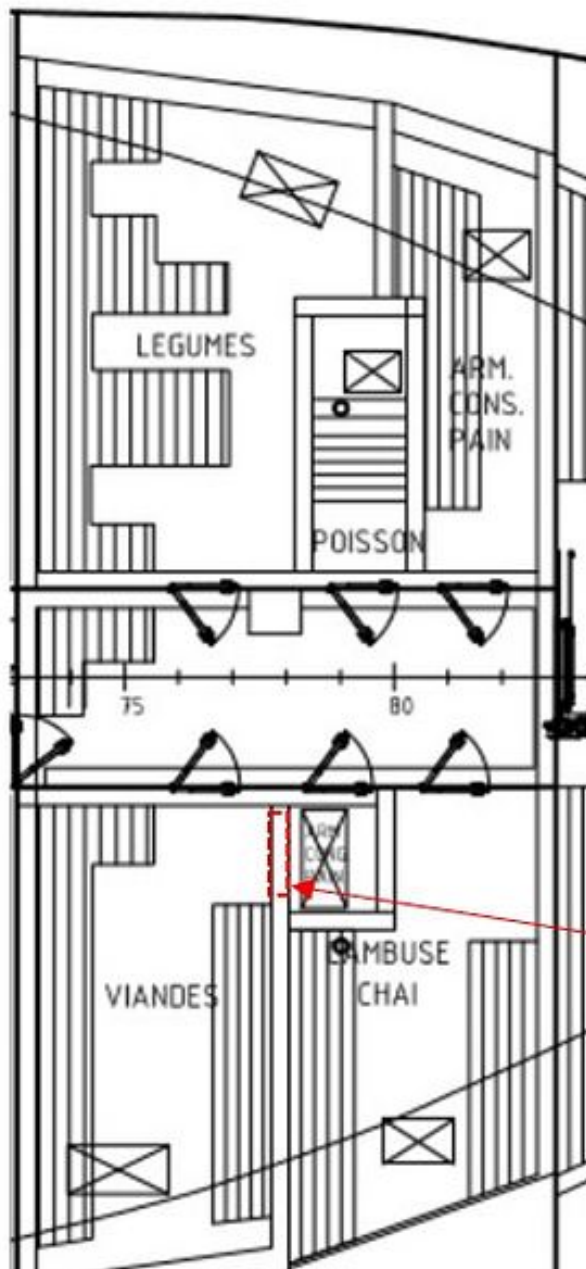
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Closing access		Per unit	1.0
Disposal		Per unit	1.0
New access rebuilt as per specifications		Per unit	1.0

Images:

(Images start on next page)





To be executed by: Yard, Specialist

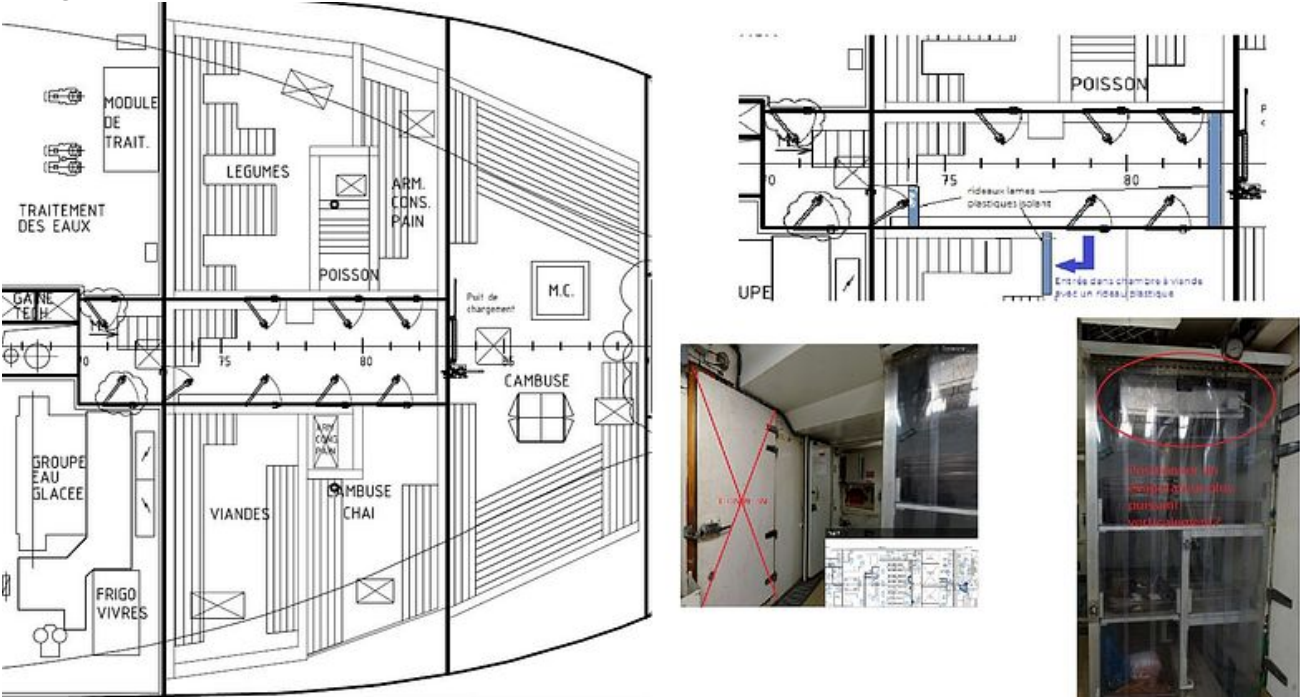
Description:
The work involves :

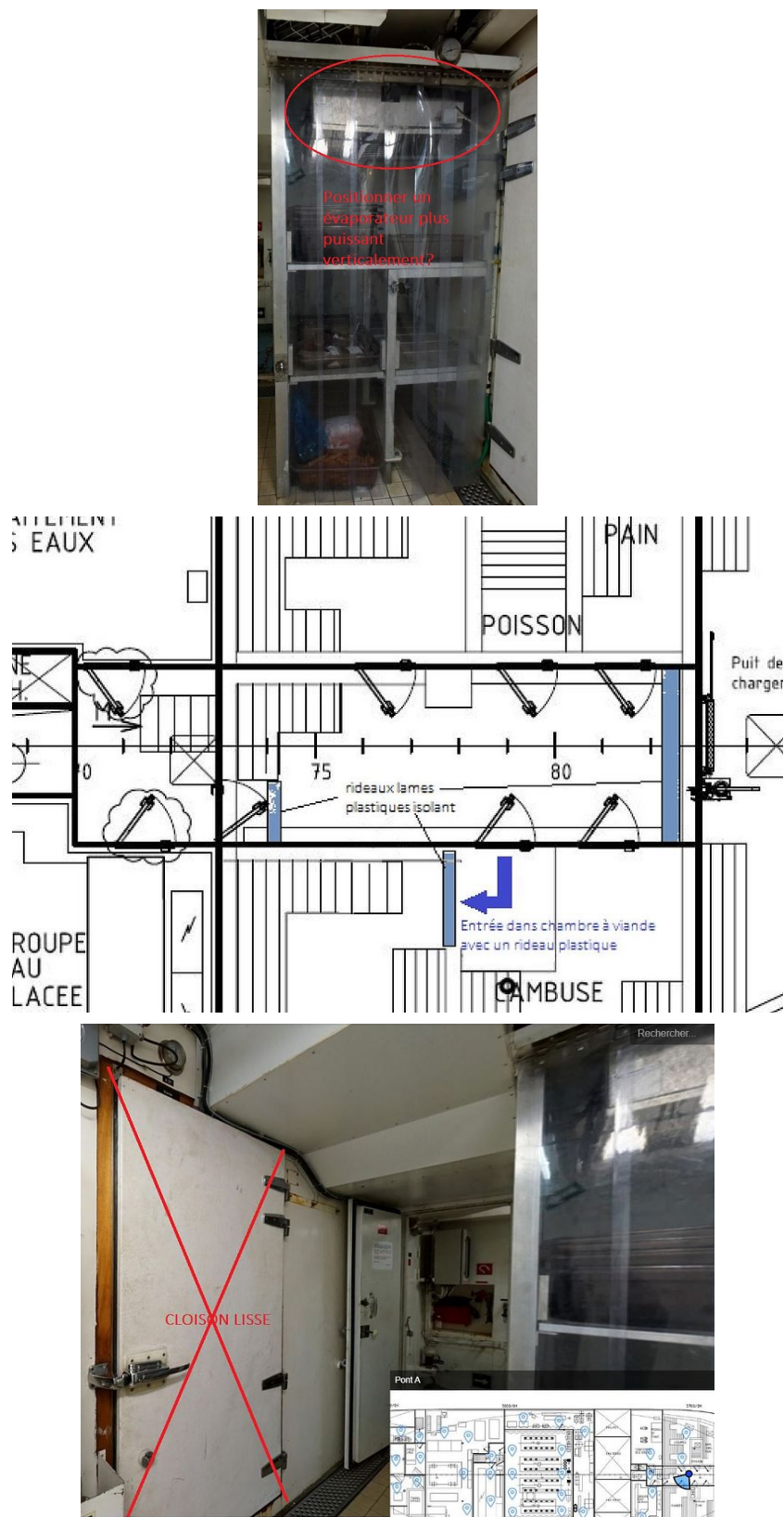
- Removing the existing evaporator
- Removing the shelves and clearing the area
- Making the brackets for the new evaporator and fixing it according to the plans provided by the owner
- Reconnect the new evaporator
 - Power supply
 - Gas supply
- Install the condensate drainage system
- Rebuilding shelves to current hygiene standards in accordance with plans supplied by the owner.

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Descript ion	Quote type	Quantity
Dismantling the old shelves		Per unit	1.0
CF.A3.004_Removing and fitting a new evaporator		Per unit	1.0
Reassembly of new shelves according to specifications given by the owner in the appendices		Per unit	1.0

Images:





To be included: Ventilation, Corrosion protection, Light, Spare part yard supply, Correction drawings, Cleaning after, Provide drawings

To be executed by: Yard, Specialist

Surveyed by: Owner's representative

Material supply by: Yard, Owner

Description:
Laminating surface

Floor: 12.25m².

Ceiling: 12.25m².

Partitions (4): 10.5 m² x 2 and 12 m² x 2.

Total: +/- 70m²

Removal

- Dismantling aluminium shelving racks
- Remove the evaporator and secure the gas and electricity supplies
- Removal of the existing layer and the framing wood in the room
- Waste treatment by shipyard
- Check that there is no corrosion under the wood substrate and treat surfaces if necessary
- Apply a primer if necessary

Refitting

COLD ROOM MADE OF POLYURETHANE VERTICAL FOAM PANELS POLYISOCYANURATE

- Fire grade B-s1-d0
- Interlocking male-female panels
- 2-sided stainless steel 304 sheet 6/10th
- 1160 mm module
- -PXL A
- Px-120 PIR 2Faces
- All panel contours are closed with 12/10th stainless steel
- Dimensions : 4200 x 3850 x 2200

REINFORCED STAINLESS STEEL FLOOR PANEL (GI)

- panel width 1200mm. Lengths according to depending on model.
- High density polyurethane foam core (40Kg/m³ +/- 2Kg).
- Male-female seals on all 4 edges.
- Reinforced floor (stainless steel)
 - * Uniformly distributed static load: 4,000 kg/m².
 - * Concentrated static load: 500 kg/60 cm².
 - * Dynamic load on trolley

IMPORTANT: TOPS FULLY CLAD WITH 20/10 ANTI SCRATCH PREVENTION WELDING BETWEEN FLOOR PANELS USING TIG OR LASER

NEGATIVE ISOTHERMAL HINGED DOOR IN STAINLESS STEEL/SHEET METAL

- Leaf :
 - Stainless steel facing
 - Polyurethane foam core
 - 120 mm thick

- Frame :
 - 304 L stainless steel welded frame with polyamide thermal break
 - 3-part 304 L stainless steel counter-frame
- Fittings :
 - Composite hinges with helical ramps
 - FERMOD 521 closure
- Sill :
 - Profile and thermal break by ALU profile clad in stainless steel sheet to be integrated
- in the floor
- Joint heating:
 - 220V heating cord positioned in the frame and door sill
- Sealing:
 - EPDM seal on all 4 sides

Running-up / trials

- Reinstallation of the evaporator
- Reinstalling the lighting
- Reinstallation of safety devices
- Refilling with CF installation gas. ITEM A3

OPTION: Repair of the resin door sill in the adjacent -40°C cold room:

Suspected rotting of underlying plywood layers

- Removal of damaged areas (see photo below)
- Once healthy material (wood and resin) was found
- Repair the laminate on the cracks in the floor
- Repair of floor covering

IMPORTANT:

- Plan for thorough cleaning after the work has been completed
- Plan to carry out this work at the start of the technical stop to allow the materials maximum drying time
- Provide heating and ventilation where necessary

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
complete and exhaustive refurbishment of the scientific -20°C cold store_New buiding and return to service	All the materials needed for the construction are supplied by the ship repair yard.	Per unit	1.0
Removal and disposal works		Per unit	1.0
CF.D.002 Steel works relative to G.003		Per unit	1.0
CF.F013 Paintwork relative to G.003		Per unit	1.0
Repair of the resin door sill in the adjacent -40°C cold room		Per unit	1.0

List of attachments:

- 1) EM 32(1-2)_C - Aménagement de la Côle à Poissons (09.10.95).pdf, 9.06 MB
- 2) EM 32(2-2)_D - Aménagement de la Côle à Poissons.pdf, 7.62 MB

Images:

(Images start on next page)





To be executed by: Yard

Description:

- Clearance behind this door to recover the width of the gangway with this door open.
- Keep the door open with an electromagnet controlled from the bridge to close it, as on decks B & D. (see chapter E.501)
- Removal of the handrail and reduction of its length to the length required to open the door fully.

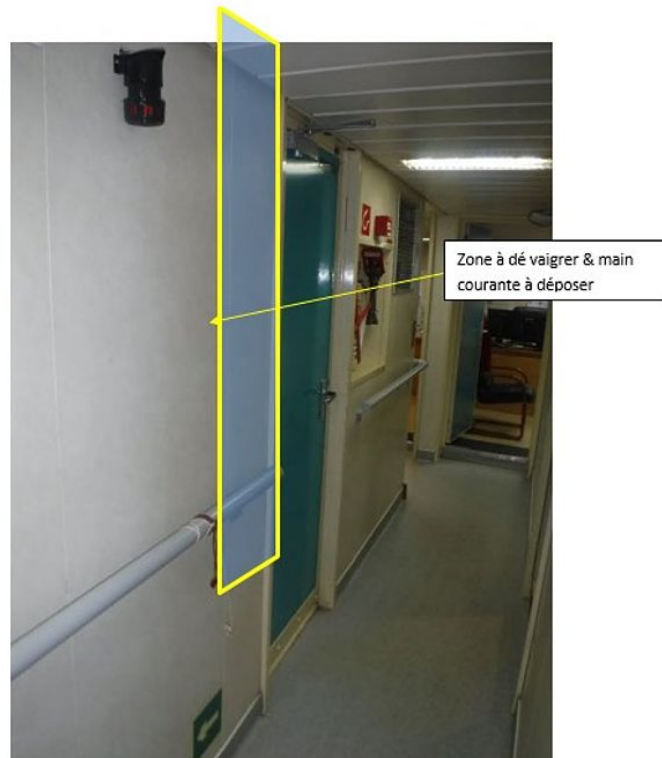
Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
New design creation		Per unit	1.0

Images:

(Images start on next page)



To be executed by: Yard

Description:

Replacement of ceiling slats of B, C deck passageways 24 linear meters :

- Aluminium /width: 200mm/thickness: 15 mm
- Colour: RAL 9001 satin
- Fire class: BO Without perforation
- Insulation: type 208
- DAMPA brand

Nota Bene:

Only slats with fluorescent tube lighting are to be removed and replaced by new slats on which to fit our lights: spotlights supplied by Mantagua: 220V Syl-Lighter LED II 165 RO 12W NW DALI and 24V Tudy inox blanc 20W IP67. (GENAVIR Supplies)

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Electrical disconnection of neon lights		Per unit	12.0
Slats dismounting		Per unit	12.0
LED spotlights adaptation on new slats (shipyard supplies)		Per unit	12.0
New slats installation & electric connection		Per unit	12.0

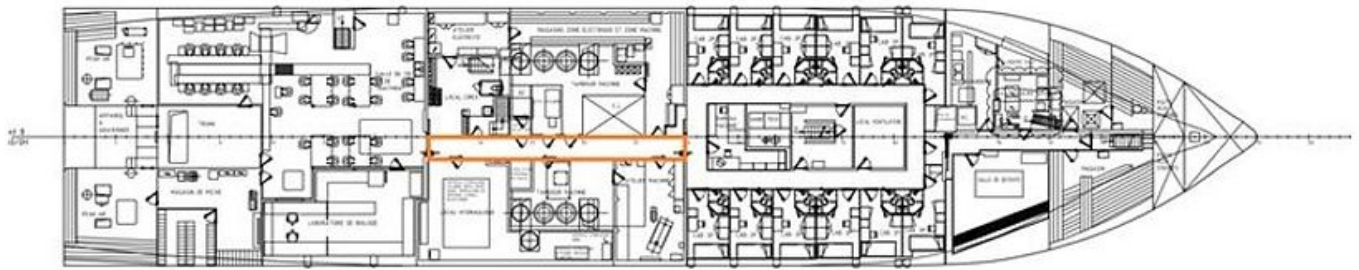
List of attachments:

1) ED474-7100-03-B-SFP-BC-CEILING.pdf, 2.13 MB

Images:

(Images start on next page)

B deck passageway approx. 20m²



C deck passageway approx. 25m²



To be executed by: Yard

Description:

The job involves creating a bolted access hatch to allow access to a motorised fan that has been trapped behind the bulkhead since the ship was new.

- Removal and environmental protection.
- Cutting the bulkhead
- Making the 1m x 1m access hatch

Once the motorised fan has been visited (Item E.001)

- Fitting the access hatch
- Replace the shelves
- Cleaning the laboratory

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

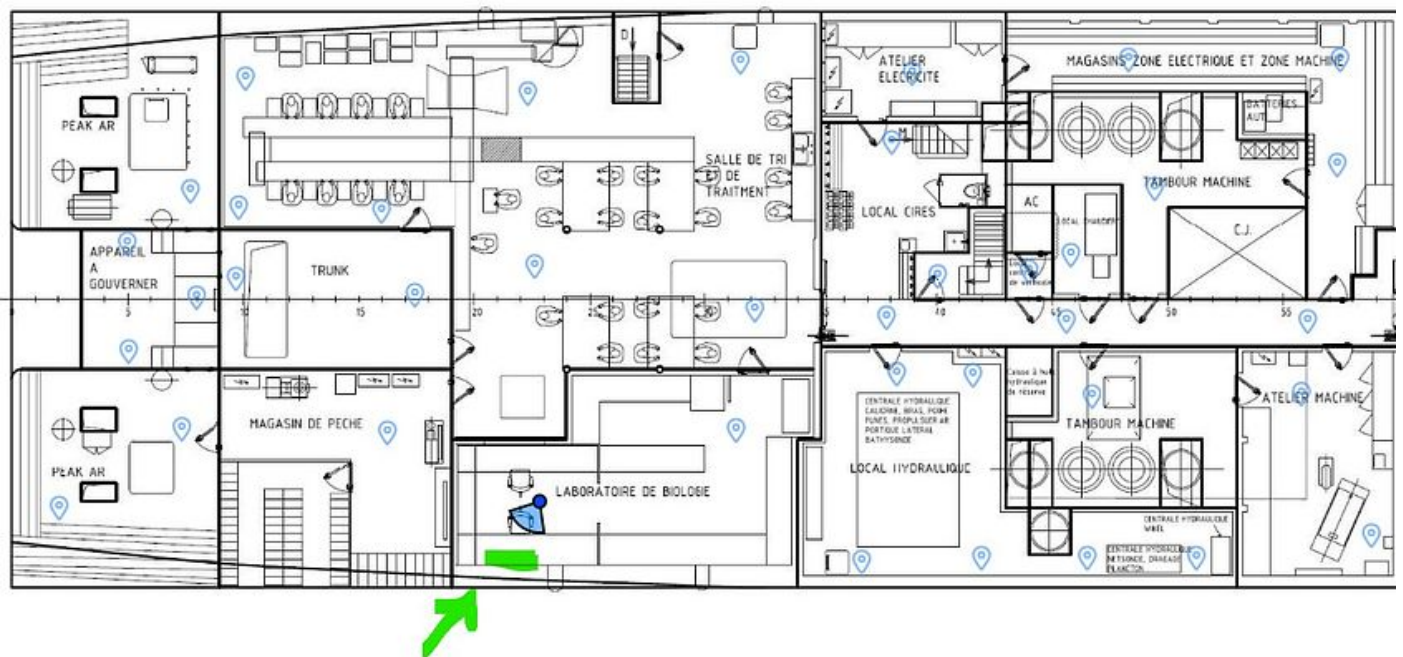
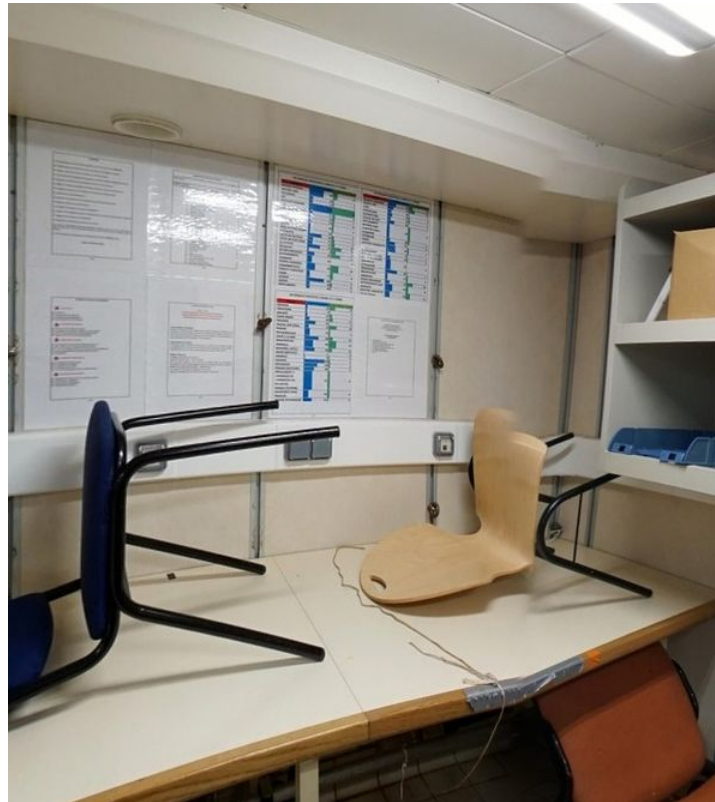
Name	Description	Quote type	Quantity
Protection_access_cleaning		Per unit	1.0
New access creation		Per unit	1.0

List of attachments:

1) ED474-2100-CM46-A- Modification cloison laboratoire biologie.pdf, 328 KB

Images:

(Images start on next page)



To be executed by: Yard

Description:
General

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
general		Per unit	1.0

List of attachments:

- 1) AC 8_D - Répartition des Accès et Echappées.pdf, 4.22 MB
- 2) Assèchement.pdf, 734 KB
- 3) ED474-1000-14-0-Franc-bord.pdf, 2.44 MB
- 4) ED474-1000-PL 01-1_V - Plan d'Ensemble - Vues en Plan.pdf, 1.48 MB
- 5) ED474-5400-PL38-L-PLAN DE SECURITE DISPOSITIFS DE SAUVETAGE ET EVACUATION.pdf, 3.09 MB
- 6) PL 42_C - Compartimentage.pdf, 8.29 MB
- 7) PL 46 - Cas de Chargements - Configuration Pêche - Etat Intact et après Avarie.pdf, 2.33 MB
- 8) PL 47 - Cas de Chargements - Configuration Océanographie Physique - Etat Intact et après Avarie.pdf, 2.31 MB
- 9) PL 48 - Cas de Chargements - Configuration Pasisar - Etat Intact et après Avarie.pdf, 2.17 MB
- 10) PL 49 - Cas de Chargements - Configuration Rov 6000 - Etat Intact et après Avarie.pdf, 2.32 MB
- 11) PL 50_A - Courbes de Capacités.pdf, 16.6 MB
- 12) PL 51 - Cas de Chargements - Configuration Transit - Etat Intact et après Avarie.pdf, 733 KB
- 13) PL 53 - Damage Control Booklet THALASSA.pdf, 2.15 MB
- 14) PL 54 - DAMAGE CONTROL PLAN THALASSA.pdf, 2.34 MB
- 15) TU 118 - Relevés sur Coque.pdf, 1.58 MB
- 16) TU 13_J - Schéma d'Assèchement - Nomenclature.pdf, 623 KB
- 17) TU 13_J - Schéma d'Assèchement.pdf, 14.1 MB
- 18) TU 14_G - Schéma Ballastage - Nomenclature.pdf, 336 KB
- 19) TU 14_G - Schéma Ballastage.pdf, 2.8 MB
- 20) TU 1_I - Nomenclature Schéma Incendie.pdf, 1 MB
- 21) TU 1_I - Schéma Incendie.pdf, 11.2 MB
- 22) TU 21_J - Schéma Air Comprimé - Nomenclature.pdf, 705 KB
- 23) TU 21_J - Schéma Air Comprimé.pdf, 19.4 MB
- 24) TU 24_G - Nomenclature Schéma Transfert Gas-Oil.pdf, 386 KB
- 25) TU 24_G - Schéma Transfert Gas-Oil.pdf, 7.73 MB
- 26) TU 3_C - Protection par CO2 - Schéma.pdf, 6.74 MB

To be executed by: Yard

Description:

Regarding the number of sensitive equipments fitted on the hull, a particular care shall be taken for block arrangement. The yard is responsible of the block arrangement.

The yard shall provide a docking plan corresponding to its facilities latter two weeks before vessel arrival.

The blocks arrangement shall be checked in the dock by the owner's representative before docking the vessel.

Divers assistance is requested during the vessel's docking and shall be included in the offer.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Docking and undocking	Including cleaning of dock after end of work	Lump sum	1.0
Divers		Lump sum	1.0
Arrival in Yard		Lump sum	1.0
Departure from Yard		Lump sum	1.0

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Laydays in drydock	Please update the quantity with the estimated/scheduled number of days.	Per unit	20.0 days

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Arrival in Yard		Lump sum	1.0
Departure from Yard		Lump sum	1.0

To be executed by: Yard

Description:

Regarding the number of sensitive equipments fitted on the hull, a particular care shall be taken for block arrangement. The yard is responsible of the block arrangement.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
DOCKING BED (including special arrangement if necessary)		Lump sum	1.0

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Shore power connection + disconnection	Both connection and disconnection included in 1 (count) time.	Per unit	1.0 cable time
Shore power consumption	Please also update the quantity with an estimate.; assumed/estimated for dock period only	Per unit	36646.0 kWh

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fireline connection & disconnection	Both connection and disconnection included in 1 (count) time.	Per unit	1.0 time
Fireline pressure maintenance	Please update quantity with your estimate.	Per unit	40.0 days

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fire watchman - daily shift	Please update the quantity with your estimate.	Per unit	39.0 shifts
Fire watchman - overtime shift	Please update the quantity with your estimate.	Per unit	38.0 shifts

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Fresh water connection + disconnection	each time includes both connection and disconnection.	Per unit	1.0 times
Fresh water supply	Please update the quantity with your estimate REEMPLIR A LA SORTIE LES BALLAST ED ET EDM AVEC L'ED POUR REGLER LA STAB ==> REMETTRE LA MEME STABILITE AVANT REMISE A FLOT QUE LORS DE LA MISE EN CALE SECHE	Per unit	0.0 tons

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Gas-free certificate	Please update the quantity with your estimate.	Per unit	36.0 tank days

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Portable ventilation fan	Please update the quantity with your estimate	Per unit	0.0 days

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Garbage removal		Per unit	20.0 times

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Oily/industrial garbage disposal		Per unit	0.0 tons

To be executed by: Yard

Description:

Crane service and other transportation services for provisions, machinery parts and other stores to be provided for owner's services as requested. Yard to inform minimum notice required.

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Crane usage	For owner's services only. Yard to inform minimum notice required and also any minimum hours per request in yard remarks.	Per unit	20.0 hours

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Unloading trunks with spare parts		Per unit	0.0

To be executed by: Yard

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Gangway installation and removal	Each time includes both the installation and removal	Per unit	2.0 time

To be executed by: Yard

Cost items, yard:

In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Tower staging	Please include in the remarks any minimum quantities.	Per unit	0.0 m3

To be executed by: Yard

Description:
(washing machine and dryer for boiler suit shal be included)

Cost items, yard:
In the provided Excel sheet, please quote on the following cost items:

Name	Description	Quote type	Quantity
Shower & toilets facilites on dock during the entire docking period		Per unit	0.0

To be executed by: Yard

