

|  |
| --- |
| **Cadre de réponse – Mémoire technique** |

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| --- |
| **AN25.20**  **Prestation scientifique sur la génération automatique de microstructures représentatives de matériaux pour le calcul en fatigue** |

**Ecole Nationale Supérieure d'Arts et Métiers**

**Direction des Affaires Immobilières**

151 BOULEVARD DE L'HOPITAL

75013 PARIS

Ce cadre de mémoire ne sera en aucun cas un document d’information générale mais devra être rédigé spécialement pour le présent marché en prenant en compte ses spécificités.

**Cadre de réponse du mémoire technique : un maximum de 30 pages (15 feuilles recto verso) est demandé (Préconisation). Le candidat peut transmettre des annexes généralistes, s’il le souhaite, toutefois, celles-ci ne rentreront pas dans la notation.**

Critère 2-1 : VALEUR TECHNIQUE – Méthodologie d’Identification des thématiques proposées pour l’analyse de la littérature connexes aux mots clés suivants : IA générative, analyse d’images 2D/3D, tomographie RX (20 pts)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

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Critère 2-2 : VALEUR TECHNIQUE – Méthodologie de conception d’une base de données de tomographies RX présentant une variabilité paramétrique importante (forme et taille des pièces, matériaux, procédé, paramètres RX, résolution, etc.…) (20 pts)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

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Critère 2-3 : Méthodologie d’implémentation et évaluation des modèles génératifs entrainés sur la base de données. Réalisme du point de vue statistique des microstructures générés en se comparant à des données expérimentales issues de tomographies RX non-incluses dans la base de données d’entrainement (20 prs)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

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Critère 3 : Critères sociétaux applicables au personnel chargé de l’exécution des prestations

**(5 points)**

Décomposition en sous-critère :

3-1 : Politique en matière de bien-être au travail : sur 2.0 points

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3-2 : Actions égalité femmes / hommes, et de diversité : sur 1.5 points

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3-3 : Politique inclusive et pratiques solidaires : sur 1.5 points

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Critère 4 : Performances en matière de protection de l'environnement en lien avec l'objet du marché

**(5 points)**

Décomposition en sous-critère :

4-1 : Moyens mis en œuvre pour réduire empreinte carbone : sur 3.0 points

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4-2 Traitement déchets, digitalisation, réduction consommation ressources : sur 2.0 points

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**DATE, CACHET ET SIGNATURE**