Advanced design, monitoring , development and validation of novel HIgh PERformance MATerials and components

Résultats

Informations projet

HIPERMAT

N° de convention de subvention: 958196

Site Web du projet

DOI
10.3030/958196

Projet clôturé

Date de signature de la CE
24 Septembre 2020

Date de début
1 Novembre 2020

Date de fin
30 Avril 2024

Financé au titre de
INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Advanced manufacturing and processing

Coût total
€ 5 360 042,50

Contribution de l'UE
€ 5 360 042,50

Coordonné par
FUNDACION AZTERLAN
Spain

Ce projet apparaît dans...

20 Mai 2024

CORDIS fournit des liens vers les livrables publics et les publications des projets HORIZON.

Les liens vers les livrables et les publications des projets du 7e PC, ainsi que les liens vers certains types de résultats spécifiques tels que les jeux de données et les logiciels, sont récupérés dynamiquement sur OpenAIRE.

Livrables

Documents, reports (10)

D5.1.- Report of components manufactured using hydrosolidification
Comparative analysis of beams manufactured using standard process with those manufactured using hydrosolidification.

D6.2. Final technical, economic and environmental report
final report incorporating the achivements in terms of mateials and prototype components through new technologoes including economic and environmental final assesments.

D5.2.- Report of components manufactured by LMD.
Comparative analysis of rolls manufactured using the standard process with those manufactured using LMD.

D3.5.- Comparative evolution of LCA from standard process to alternatives materials and alternative manufac-turing technologies
Evolution of environmental impact once data about material samples and component like geometries aer available.

D5.3.- Report of components manufactured using ceramic coatings

Comparative analysis of rolls manufactured using the standard process with those manufactured using Ceramic coatings.

D4.1.- Report on characterization of main processed materials
Description of main processed materials in terms of microstructure and physical properties of solidification and phases precipitation

D3.2.- Report containing material property predictions to be used for validation of a computationally-based ap-proach to extracting input-data for process modelling.
An outlined framework for property predictions and identified design strategies for materials optimization

D5.4.- Report on embedded sensor performance
. Results of embedded sensor performance in terms of accuracy and degradation with time.

D4.2.- Report on processability window for powder generation of alternative high wear resistance alloys
Description of processing window for the obtention of high quality powder for final LMD use.

D4.3.- Report of material selection and performed validation test.
Detailed description of test performed for material selection and final high temperature mechanical, wear and corrosion properties achieved.

Open Research Data Pilot (1)

D1.2 Data management plan
will include the data generated by the project and establish which will be made accessible for verification and reuse and how it will be curated and preserved

Publications

Peer reviewed articles (2)

Printed Electronics by Plasma Spraying:Case Study for High Temperature Sensors
Auteurs: Florin D. Duminica, Muthu Karuppasamy, Florian Dawance, Jens Baber, Holger Friedrich & Philippe Guaino

Publié dans: Journal of Thermal Spray Technology, Numéro Volume 33, 2024, Page(s) pages 1324–1337, (2024), ISSN 1059-9630
Éditeur: ASM International
DOI: 10.1007/s11666-024-01773-9

Failure analysis of an AISI 310 stainless steel beam reinforcement fracture during service in a rolling beam furnace
Auteurs: A. Niklas , M. Rouco , D. Garcia , F. Santos , Á. Sanz
Publié dans: Engineering failure analysis, Numéro Engineering Failure Analysis Volume 161 (2024) 108283, 2024, ISSN 1350-6307
Éditeur: Pergamon Press Ltd.
DOI: 10.1016/j.engfailanal.2024.108283

Ensemble de données

Ensemble de données via OpenAIRE (1)

High temperature properties incuding creep, creep crack growth rate and thermal fatigue linked with chemical composition of alloys derived from 1.4848 refractory stainless steels
Auteurs: Santos Barrena, Fernando
Publié dans: Zenodo

Dernière mise à jour: 31 Juillet 2024

Permalink: https://cordis.europa.eu/project/id/958196/results/fr