

# REAL-TIME MONITORING OF DED ADDITIVE MANUFACTURING PROCESS FOR ZERO DEFECT MANUFACTURING (REDAMP)



January 2020

510k€ EIT Funding

System specs  
Feb/2020

Lab validation  
June/2020

Integration of systems  
Oct/2020

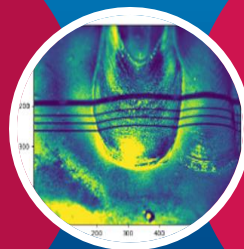
Industrial validation  
June/2021

AI coupling  
Nov/2021

## CHALLENGE



Need for zero-defect production by enabling in-line monitoring and defect detection to allow for in-situ repair & to guarantee the part's suitability for demanding applications & reduce certification cost



## SOLUTION



Adapting advanced on-line monitoring and NDT techniques for early defects detection, using AI techniques allowing immediate repair to avoid material waste & provide a pathway to certification of WAAM via NDT.



## BENEFITS



Industrialisation of inline NDT for in-situ repair of defects to reduce rejection rate and material waste and the need for rework after production., contributing to zero-defect manufacturing and facilitating certification.

## MAIN PROJECT RESULTS

**1**  
SPIN-OFF CREATED  
**Guaranteed**  
Value the future, upgrade the past

ALL DEFECTS > **500µm**  
WILL BE DETECTED  
DURING THE PROCESS



VALIDATED FOR  
MATERIALS AND  
PROCESSES

**2**  
**3**



“ *This EIT grant provided us with the chance to connect research and industries that are willing to boost and innovate their manufacturing strategies* ”



**JOACHIM ANTONISSEN**  
General manager **GUARANTEED**  
**WAAM SERVICE PROVIDER**  
REDAMP project  
**AIM:** REal-time monitoring of DED Additive Manufacturing Process for zero defect manufacturing



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