TC3 – Material Degradation, Repair **Technologies** and Manufacturing





ANDY WILLIAMS

Chromalloy



TC3 Topics

Additive Manufacturing

≻ Hot Corrosion

>ETN-US-UK Collaboration



Additive Manufacturing

During the Workshop in Genoa it was discussed to create an ETN Additive Manufacturing Working Group.

The Working Group aims would be the following:

- To develop a standard or "best practices" on the AM design and the AM turbine parts.
- To create an independent review of existing material data and the characterisation of mechanical properties and microstructures. Start by reviewing, evaluate and report on the existing Senvol database.

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Hot Corrosion

Initiative supported by John Oakey.

The first teleconference call took place on the 27th of November

ADGAS to promote the hot corrosion initiative in the Middle East.

Need to involve more users

1st step: Short survey to ask:

- Do you have Hot Corrosion issues?
- ❖ Where?
- How many engines are affected?
- Would they be interested in joining a working group?

2nd step: Evaluate the extent of the issue

- How many engines and type of the engines
- More details about the location
- Which part of the blades
- How often
- Type of fuel
- *****

Collection of parts

Survey 1:

Find Users with Hot Corrosion issues

Survey 2:

Collection of details on their issues (Type of engine, Location, fuel,...)

Hot Corrosion meeting (AGM)

Analysis of the damaged parts

Investigation for solutions

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ETN-US-UK Collaboration

Potential cooperation between the ETN community and the US-UK collaboration programme on advanced materials

ETN-UK-US DoE collaboration meeting was held in Genoa: representatives of the UK and US Department of Energy explained the objectives of the ongoing tasks

ETN Members were asked to provide topics of interest and potential contribution 8 members showed interest (additive manufacturing and micro gas turbine) ETN is discussing their participation in the meeting in April 2018, to be held in Pittsburgh

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