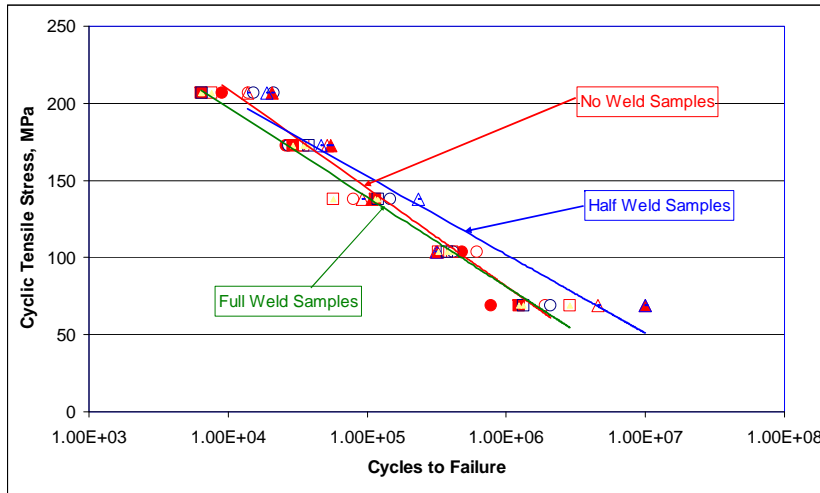




Statistical Properties for MMPDS Standard CHAMPS – A206

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S-N plots of fatigue data for three types of weld repair specimens of E357-T6 sand castings showing the effect of the type of weld repair on fatigue life.

Technical Description:

- Develop statistically validated properties for sand cast A206T4 and T7 aluminum
- Develop an AFS Recommend Practice for the in-process weld repair of aluminum-silicon hypo-eutectic alloys

Benefits

- Incorporating A206 T4 and T7 into MMPDS
- Lighter weight component designs
- Improving design flexibility
- Reducing lead-times (weld repairs)
- Part consolidation
- Developing a template to introduce other cast materials into MMPDS

Partners:

AFS, Eck Industries, Carley Foundry, Denison Industries, Magma, PDA, Spirit AeroSpace, Boeing, Northrop-Grumman, Lockheed-Martin, Morel Ind., Yankee Casting, UAB



R&D Milestones

- Test plate design and gating definition
- Tooling production and casting test plates
- X-ray and grade test plate sets
- Test and analyze samples for properties
- Compile test data
- Correlate NDE, structure, and properties

Implementation Milestones

- Interim briefings to MMPDS
- Incorporate results into MMPDS