THE ADVANCED CASTING RESEARCH CENTER – ACRC

Project Fact Sheet

FRICTION STIR PROCESSING (FSP) OF ALUMINUM CAST ALLOYS FOR HIGH PERFORMANCE APPLICATIONS

FSP achieved localized microstructure evolution

FSP achieved mechanical properties enhancement (static and dynamic)

Typical Stress-Strain Curves

Fatigue Property (S-N Plots)

FSP achieved localized synthesizing of composite structure in the cast component

ENEFITS

SP can be incorporated in the verall machining cycle as a post-asting processing option.

SP achieves localized manipulation f cast structure to attain wrought aterial attributes.

SP achieves localized strengthening f the cast components to open up he design space especially for the ynamic properties.

SP achieves localized synthesizing f composite structure for high emperature applications.

SP is ideal for applications such as iesel engines and for critical and igh integrity components.

MPACT

SP is an effective solid-state-post-rocessing technique.

SP increases the design space of ast products to that of wrought lloys.

SP enhances the microstructure nd both static and dynamic roperties.

OR MORE INFORMATION, LEASE CONTACT:

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