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

FSP achieved localized microstructure evolution

BENEFITS

SP can be incorporated in the overall machining cycle as a post-casting processing option.

SP achieves localized manipulation of cast structure to attain wrought material attributes.

SP achieves localized strengthening of the cast components to open up the design space especially for the dynamic properties.

SP achieves localized synthesizing of composite structure for high temperature applications.

SP is ideal for applications such as diesel engines and for critical and high integrity components.

IMPACT

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

SP increases the design space of cast products to that of wrought alloys.

SP enhances the microstructure and both static and dynamic properties.

OR MORE INFORMATION, PLEASE CONTACT:

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Typical Stress-Strain Curves

Fatigue Property (S-N Plots)

FSP achieved localized synthesizing of composite structure in the cast component