UNDERSTANDING THE EFFECT OF EXTERNAL FIELDS DURING
SOLIDIFICATION OF THE AL-MG SERIES ALLOYS

PRESENTED BY:
KURT MILLS
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SCHOOL OF MECHANICAL AND MINING ENGINEERING

WHEN
12:00 pm - 1:00 pm
Tuesday 11 April 2017

WHERE
Room 502
Building 49
Advanced Engineering Building

Abstract

Light metals are commonly used in transport due to their high specific strength. However, the coarse as-cast grain structure causes poor mechanical properties and negatively impacts on downstream thermomechanical processing ability.

The addition of master alloys into molten metal during casting process is common practice in industry to achieve grain refinement. Application of external fields, such as ultrasonics are an alternative method.

The objectives of this study were to investigate the effects of Ultrasonic Treatment (UT) on the grain refinement to the as-cast structure, and determine the influence of solute content on the grain refinement achieved.

Biography

Kurt Mills is a Masters student currently under the supervision of Professor Matt Dargusch and Dr. Gui Wang. He obtained a Bachelor’s Degree in Mechanical and Aerospace Engineering at UQ, and has a strong interest in lightweight materials including light metals and composite materials for use in the aerospace sector.