

AIMS² Research Project in Materials Engineering/MSEM, Summer 2019

Research Duration: June 3, 2019 till August 9, 2019 (~15-20 hrs per week, minimum three days/wk)

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Goals and Objectives of the Project, Expectations and Outcomes:

Application of High Strength Aluminum alloys for Aircraft Applications

RESEARCH OBJECTIVES

Investigate mechanical and corrosion behavior of high strength aluminum alloys used in aircraft industry. Fellow researchers will spend multiple weeks training to learn how to prepare samples, use universal test equipment, microscope, and conduct metallographic analysis, and workshop on Lab. safety. Students will explore the effects of different heat treatment conditions on alloy performance for several high strength aluminum alloys such as 7050, 7055, 7075 and light weight high strength Al-Li alloys such as 2095. Materials characterization will be conducted using SEM/EDAX analysis.