

## **Cast Aluminum Alloys having Improved Microstructural Stability and Strength at 350 °C**

### **Disclosure Number**

201603642

### **Technology Summary**

This invention disclosure is supplemental to a previously reported invention disclosure: S-138,205 (ID-3569). The present invention comprises compositions of cast aluminum alloys that have stable microstructures up to 350 °C. The stable microstructures also provide exceptional mechanical properties at elevated temperature and therefore, engine cylinder heads with higher maximum operating temperature can be designed with these new alloys. In addition, this invention describes compositional and processing changes that allow exceptional hot tearing resistance for a subset of the alloys with improved elevated temperature mechanical properties.

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