

## COMMERCIAL TRANSPORTATION

### Energy

ALTEN Technology has proven capability to accommodate ramp-up and ramp-down phases during a project's life cycle

Experience in aluminum casting best practices

#### KEY DATA

Team Size: 2 Engineers

Time: Since 2021

Location: Greensboro, NC  
Work Package

#### KEY TOOLS & TECHNOLOGIES

CATIA V5, ANSA/META, Nastran

## CASTED BATTERY CLOSURE

### OVERVIEW

- ALTEN Technology has supported our client since 2021 by adapting a machined aluminum battery enclosure and making it manufacturable and mass-producible through aluminum casting
- The battery enclosure is made for the heavy-duty commercial sector

### PROJECT DETAILS

- Optimized the design of a machined battery enclosure prototype to make it suitable for aluminum casting
- Evaluated the best casting manufacturing method for the adapted design and production-intent
- Performed CAE analysis of original machined design and validation of new casted design
- Performed static, frequency response fatigue, and crush analysis
- Documented best practices and material selection
- Completed testing and verification documentation
- Supported evaluation of casting supplier

