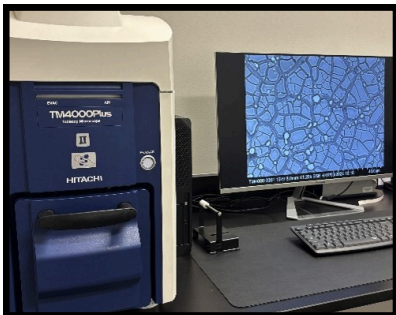
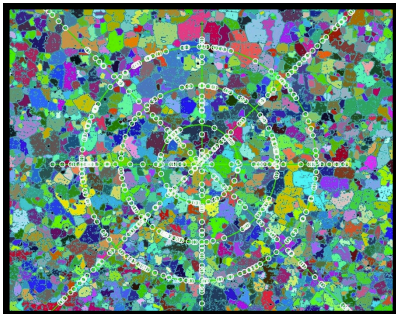




# METALLURGICAL SERVICES

## IN-HOUSE CAPABILITIES

Rolled Alloys Metallurgical Services offers technical assistance as a complementary and value-added service for customers.



## TECHNICAL ASSISTANCE

- Material selection assistance
- Fabrication assistance
- On-site or online tailored technical presentations
- Sample coupons

## METALLOGRAPHY

- Scanning Electron Microscopy (SEM)
- Electron Dispersion Spectroscopy (EDS)
  - Elemental Mapping
- Optical Microscopy 100 - 1000x
- Stereomicroscopy 5 - 50x
- Microstructure Examination
  - Grain Size - ASTM E112
  - Inclusion Measurements - ASTM E45
  - Duplex Phase Fraction Determination
  - Alpha Case Depth Determination

## FAILURE ANALYSIS

- Specialize in high-temperature and corrosion related failure mechanisms.

## MATERIALS TESTING

- High-Temperature Oxidation Testing
  - Capable of Testing up to 2400°F in Air
- Corrosion Testing
  - Immersion Testing - Pitting, Crevice, and U-Bend Testing
- Specification Specific Testing
  - ASTM G48
  - ASTM A262 Methods A and E
  - ASTM A923 Methods A and C
  - ASTM A1084 Methods A and C
- Hardness Testing (HRC, HRBW)
- Non-Destructive Examination (NDE)
  - Dye Penetrant Inspection
- Positive Material Identification

*\*Rolled Alloys metallurgical laboratory is not accredited and is not to be used in place of accredited test lab. Results of testing are for reference only.*