2018 nCode User Group Meeting

February 28 - March 1, 2018 – Novi, MI USA

nCode
ReliaSoft
omnicon
Advanced Materials Characterization & Testing (AMCT)

Dr Andrew Halfpenny
Director of Technology – nCode Products
AMCT – Virtual Lab Tour
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Test frame & fixtures
- Load cell
- Specimen
- Wood’s metal pot
- Hydraulic actuator
- LVDT displacement transducer

- Clip gauge extensometer for EN testing

- Hydraulic actuator
- LVDT displacement transducer
AMCT – Virtual Lab Tour
AMCT – Customer Services

• **Materials Characterisation**
  - Deriving parameters for various material models: *SN, EN, TMF, WholeLife, Welds, Haigh models ...*
  - Characterising material improvements: *Heat & surface treatments, weld improvements*
  - Characterising production processes: *Surface finishes, thin-sheets, brazing and jointing ...*

• **Materials Testing**
  - Specimen/component
  - Durability certification

• **Materials Assurance**
  - Quality assurance
  - Supplier comparisons
  - Material comparisons and short-listing
AMCT – Research Activities for our Products and Customers

- Light-weighting
  - New jointing techniques (SPR’s, etc.)
  - Effect of crack growth
- Engineering Polymers
  - Unreinforced and short-fibre reinforced components
  - Vibration fatigue of engineering polymers
  - Thermal & moisture effects
- Composite Materials
- Additive Manufacturing
- Model verification and validation
  - Thin-sheet materials
  - Elevated temperatures
  - Load sequence effects
  - R ratio characterisation
  - Testing methods development e.g. Artificial joints and limbs
www.hbmprenscia.com

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Materials testing services since 1997