SC17 Materials Update

2017 SC17 Winter Meeting
Bruce Witwer – Dril-Quip, Inc.
SC17 Materials Liaison
API SC21

• Next meeting January 18\textsuperscript{th}, 2017
• Chair: Rob Hilts (Rob.Hilts@Halliburton.com)
• Membership held by various operators, designers and manufacturers
• Meetings held twice a year
• Items balloted
  • Subsequent SRRR created
• New agenda items
  • TBD
API SC21

• Temperature De-Rated Mechanical Properties for HPHT Materials
  • Mechanical data for use with FEA
  • Follow-up to AWHEM on Ni alloy 718
  • Led by Bill Bailey (Baker Hughes) – active

• Development Of New Hardness Conversion Tables For ASTM E140
  • Hardness testing of PH nickel alloys for API 6ACRA (various scales)
  • Hardness testing of martensitic, duplex and super duplex stainless
  • Joint initiative with ASTM
  • Led by Tim Haeberle (GE) – active
API SC21

• Grade 660 Elevated Temp Tensile Testing
  • Unrealistic derating values in API 6A Appendix G and API TR6MET for ASTM A453 Grade 660 (A286) stainless steels
    • Stronger material at higher temps
  • Grade 660 derating values were removed from Appendix G in API 6A Errata 6
  • Led by Tim Haeberle (GE) – active

• NDE Requirements for Bar & Tube
  • Missing or varying requirements to be standardized, including test methods
  • Establish standard practices, personnel requirements and acceptance criteria for evaluation of surface and internal
  • Led by Neal Ferguson (Element Materials Technology) – active
API SC20

• Supply Chain Management
  • Chaired by Rick Faircloth (Cameron)
  • Katie Burkle (API standards associate)

• Next Meeting: January 19th, Winter Standards Meeting (Austin TX)

• Current Activity
  • API 20E/F 2nd Edition – Alloy/Carbon Steel & CRA Bolting for Use in the Petroleum and Natural Gas Industries
    • 20E in comment resolution (07/12/2016), publish imminent
    • 20F meetings to be held in Q1 ‘17
  • API 20J - Qualification of Distributors of Metallic Materials for Use in the Petroleum and Natural Gas Industries
    • Comment resolution (4/28/16)
    • Pending recirculation ballot
Steel Forgings for Subsea Applications

• DNV GL contact: Morten Ro Helsem (Morten.Ro.Helsem@dnvgl.com)
• First Edition February 2015
• Active: Quality Management Requirements
  • RP proposal ready for external hearing: Start of January 2017
  • Hearing finalized: Start of February 2017
  • RP released: March 2017
• Active: JIP Amendment 01
  • Subsea Industry Advisory Board
JIP Amendment - Subsea Industry Advisory Board

• Project deliverables:
  • Internet page regarding the forging RP’s
  • Response to clarification/questions and proposed interpretations of the RP
  • Distribution of interpretation to the advisory board, including facilitation of discussions
  • Clarifications/interpretation published on DNV GL’s internet pages
  • Minutes of meeting from advisory board meeting
  • Recommendations for way forward at the end of 2 years

• Schedule:
  • 01/01/2017 to 12/31/2018
DNV GL Subsea Welding JIP

• Kickoff meeting to be held in Høvik, 2/1/2017

• Project objective/scope:
  • To harmonize operator specific requirements with regard to welding of subsea pressure containing equipment, including inspection and quality requirements
  • Clad and jointed steel with dissimilar metals
  • Welded joints in Duplex/Super Duplex SS’s

• More information: www.dnvgl.com/SubseaWelding
  • Christian Markussen
  • Tone Hasle