MINUTES OF THE DESIGN TASK GROUP MEETING OF 17 JUNE 2009

Objective

The objective of the meeting was to finalize our recommendations to SC 6 and SC16 at the summer annual meeting in Colorado.

Resolved issues

Issues resolved at the previous meetings were unified design requirements for Specs 6A, 16A and 16C including using 90% of yield strength as a limit for membrane stress at test pressure and limiting membrane plus bending stress in bolting to the yield strength. It was noted that the bolt stress considered is purely tension and does not include any torsional stress from makeup torque. See attached comparison of the API design requirements.

Handling of the 2007 Code rules

The 2007 rules present a dilemma because they permit higher stresses but also require much higher Charpy impact values. The 2004 Code requires 15 ft-lb like API 6A. After some discussion it was agreed that the use of 15 ft-lb had been shown to be adequate for API 6A equipment in TR 6AM, however the consensus was that we should not “cafeteria shop” and choose to use the design rules but not the material Quality Control. This would be particularly indefensible on PSL 1 and 2 equipment which does not receive full volumetric and surface NDE.

It was also felt it was impractical to use one design code for PSL 1 and 2 and another for PSL 3 and 4.

A further consensus was that the CVN values required by the 2007 code, i.e. 60 ft-lb for 80K material with 1.5-in thickness, were unrealistically high for most equipment. The requirement for different values for different thicknesses and yield strengths also would pose practical problems.

Therefore the group unanimously concluded that we should continue to use only the 2004 edition of the ASME Code. By listing it as a normative reference with a date of 2004, all references to information in the ASME Code can remain unchanged.

At some point there should be a rewrite of the design sections of the standards to incorporate the methods of the 2004 Code, eliminating the problem of referencing an obsolete standard. One possibility would be a separate API Standard that could be referenced by each of the equipment specifications.

We adjourned at 3:30

John H. Fowler, P,E
Chairman