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Request for Interpretation
API Spec 17D, 2nd Edition, Section 5.1.3.5

We have received your request for interpretation and provide the following in response:

Background: Paragraph 5.1.3.5 of API Specification 17D 2nd Edition specifies a stress range between 67% and 73% of the bolt's material yield stress that cannot be achieved or verified using production assembly methods. The stress range is in conflict with the statements included in Annex G paragraph G.1.3 related to the factors affecting the relationship between nut torque and bolt tension. In addition, the current wording does not reflect all flanges covered in 17D (i.e., 17SV flanges were omitted).

Question: Is it the intention that the 2nd edition requirements for stress rate be exactly between 67% and 73% of the bolt's material yield stress?

Response: No. Closure bolting of all 6BX, 17SS, and 17SV flanges used within the scope of API 17D shall be made up using methods designed to achieve a nominal preload of 67 % of the bolt's minimum specified material yield strength (SY). This stress is intended to result in a preload in excess of the separation force at test pressure while avoiding excessive stress beyond 83 % of the bolt material's yield strength.

Minimum make-up stresses for closure bolting used in Other End Connections shall be as determined by the design. Maximum make-up stresses and design stresses for closure bolting used in Other End Connections shall not exceed 83% of the bolt material's yield strength.

Sincerely,

A handwritten signature in black ink that reads "Edmund Baniak".

Edmund Baniak