API 570 - Piping Inspection Code

Last update: June 28 2007

Standard	Edition	Section	Inquiry #	Question	Reply
570	2nd Edition, Oct. 1998	3	570-I-02/03	**Background: Section 3.32 defines "Piping Engineer", but the term corrosion engineer or corrosion expert is used in several places in the code.** **Question: Does the term piping engineer include the concept of corrosion engineer?**	The term "piping engineer" is not defined in API 570. The committee has taken an action to establish a definition for this term. Any changes to the code resulting from this action will appear in a future addendum or edition of API 570.
570	2nd Edition, Oct. 1998	3.2	570-I-03/03	**Background: Sections 3.2, 3.3, and 4.3.1(k) appear to reference (or require) that non-destructive examinations be carried out to the original construction code (i.e., ASME B31.3). The code requires that ultrasonic procedures conform to ASME Section V, Article 5. This article has recently been substantially revised (in 2002) to simply reference SE-797 for UT thickness requirements "unless amended otherwise in this Article".** **Question 1: Is it the intent of the noted sections that UT thickness written procedures conforming to SE-797 should be utilized when conducting in-service thickness examinations for corrosion monitoring purposes?** **Question 2: If the answer to Question 1 is "no", is it the intent of the noted sections that UT thickness written procedures conforming to Table T-522 of ASME Section V, Article 5 in the 2002 Addenda, should be utilized when conducting in-service thickness examinations for corrosion monitoring purposes?** **Question 3: If the answer to Question 1 is "no", what procedural requirements should be followed to meet the intent of the code?**	Reply 1: No. Reply 2: No. Reply 3: Procedural requirements for ultrasonic thickness measurements are not addressed in API 570.
570	2nd Edition, Oct. 1998	5.11	570-I-01/07	**Background: Section 5.5.2 states "TMLs may be eliminated . . .under certain circumstances, such as...clean noncorrosive hydrocarbon product . . .". Additionally, 5.5.3 states "TMLs can be eliminated for piping systems with either of the following two charcateristics: . . . b. Noncorrosive systems, as demonstrated by history or similar service . . ."** **Question: Can these sentences be interpreted to mean that no TMLs need ever be established during the lifetime of a piping system?**	In accordance with 5.5.2, the owner/user should consult with persons knowledgeable in corrosion when substantially reducing or eliminating TMLs. This issue has been assigned to the API Subcommittee on Inspection for consideration in future editions of the code.
570	2nd Edition, Oct. 1998	5.11	570-I-01/00	**When should the rings for RTJ flanges be replaced?**	API 570 does not specify when RTJ gaskets should be replaced. The committee will consider adding guidance on this topic in RP 574, Inspection Practices for Piping System Components.

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570	2nd Edition, Oct. 1998	6.2.3	570-I-04/04	**Background: The purpose of this letter is to request an interpretation of the term "flammable" used in Section 6.2.3 describing Class 3 piping service. Flammable is not included in the Section 3 definitions. From the descriptions in Sections 6.1 through 6.2, the piping inspection program is intended to apply to services where the potential for explosion, fire, toxicity, or environmental impact exist in the case of leakage from the piping service. The sentence in question defines Class 3 piping service as "Services that are flammable but do not significantly vaporize when they leak and are not located in high-activity areas are in Class 3." The potential for explosion, fire, toxicity, environmental, or other potential effects from leakage from this piping is very low.** **Question 1: Could piping within an oil terminal containing oil-related liquid that is not flammable by NFPA 30 or DOT classifications be included in Class 3?** **Question 2: Would it be included in Class 2?**	Reply 1: Section 6.2 states that owner/users shall maintain a record of process piping fluids handled, including their classifications. It also provides guidance on reference documents and provides recommended classes. It is the responsibility of the owner/user to define what is applicable and what specific definitions he/she adopts. Reply 2: See Reply 1.
570	2nd Edition, Oct. 1998	6.3		**Is it acceptable to use specifically trained personnel who are not certified to API 570 to perform visual external inspection and be in compliance with API 570, Section 6.3?**	Yes. Such a role is defined as an examiner in Section 3.
570	2nd Edition, Oct. 1998	7.1	570-I-02/01	**Can nominal pipe wall thickness for Table 6-1 be used as the initial thickness for determining the inspection frequencies and retirement date and still meet the intent of API 570 and OSHA Process Safety Management, and would this involve additional requirements?**	API can only provide interpretations on requirements stated in API standards. The second edition of API 570, including Addenda 1 and 2, provides options for initial determination of corrosion rates and allows for the owner/user's experience. In past editions specific guidance did indicate that the use initially of published nominal wall thickness could be used in the absence of any other information. It is recognized that an owner/user may choose this approach until improved information is available.
570	2nd Edition, Oct. 1998	8.1	570-I-03/07	**If a piping leak is observed and operations has the ability to isolate the system for a very brief period of time, can a temporary repair (i.e. patch, full enclosure) be implemented?**	API 570 does not restrict whether or not a temporary repair can be performed, even if the piping system can be temporarily taken out of service. This is a decision that can be made by the owner/user with prior consultation with a piping engineer and the authorized piping inspector.
570	2nd Edition, Oct. 1998	8.1.3.1	570-I-01/01	**Is it allowed to use a full encirclement welded split sleeve as a "permanent repair"? Section 8.1.3.1 specifies this type of repair as "temporary". Under which conditions is this permitted?**	The conditions under which a temporary repair may remain for an extended period, upon approval of a piping engineer, are explained in 8.1.3.1.

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570	2nd Edition, Oct. 1998	8.1.3.1	570-I-02/02	**Referring to 8.1.3.1;** **Question 1: Is it acceptable in to have a lap patch near or at a structural discontinuity such as a support saddle?** **Question 2: Is it acceptable to have a lap patch cross over a weld seam? If not, what is the minimum distance permitted?** **Question 3: Is it acceptable to have a lap patch cross over another lap patch? If not, what is the minimum distance permitted?**	Reply 1: No. Reply 2: No. Reply 3: No.
570	2nd Edition, Oct. 1998	8.1.3.1	570-I-01/06	**Is the use of a full-encirclement split tee considered a temporary repair as defined by 8.1.3.1 per API 570?**	The use of any type of full-encirclement, split fitting (tee or sleeve) is considered temporary per API 570 if it used in the context of a repair (i.e. repair locally thinned area). A full encirclement split-tee can be used as a permanent installation when making branch connections/tie-ins to existing piping (i.e. in-service hot tap, or cold tie-in) that is inspected and found to be acceptable for the given service, per the applicable code.
570	2nd Edition, Oct. 1998	8.2.6	570-I-01/03	**Background: Section 8.2.6 defines the requirements for substitution of NDE for the final closure weld in a piping system, but the beginning of the section leaves room for interpretation. It says "a pressure test in accordance with 5.7 shall be performed if practical and deemed necessary by the inspector. Pressure tests are normally required after alterations and major repairs. When pressure test is not necessary or practical, NDE shall be used in lieu of a pressure test." The second paragraph explains the conditions concerning a final closure weld.** **Question 1: Is a pressure test always required for an alteration or major repair?** **Question 2: Is a pressure test always required for a final closure weld (except as detailed in 8.2.6)?**	Reply 1: No. Reply 2: No.
570	2nd Edition, Oct. 1998	8.3	570-I-01/02	**Referring to Section 8.3d, is it mandatory that the owner of a piping system remove the insulation from existing piping systems to expose all joints, including welds and bonds, for examination during leak testing when such leak testing is required for the new service conditions?**	No.
570	2nd Edition, Oct. 1998	9.7	570-I-02/06	**Background: Per 9.2.7, leak testing using liquid is permitted but we have some limitation in using certain liquids for the leak testing of the subject buried pipe line. Per 5.7 and ASME B 31.8, a pneumatic pressure test can be substituted when it is difficult to carry out a hydrostatic test.** **Question: Can we perform a leak test of the buried pipe line using the service medium (natural gas) or with nitrogen, in lieu of leak test using liquid?**	Yes, as long as the buried pipe line is located within the facility and is not covered by other jurisdictional requirements (such as the Department of Transportation in the United States). Due consideration should be given to the following: □ safety precautions for pneumatic testing (such as those in AMSE B31.2); □ inherent difficulties of accurately evaluating the recorded pressure for the 8-hour required leak test period using pneumatic testing with potential atmospheric temperature changes.

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570	2nd Edition, Oct. 1998	Appendix C		**What is the intent of using suitable tape or backing strip to avoid fusing the longitudinal weld (weld 1) to the side wall of the pipe on an encirclement repair sleeve and it is not required for welds 2 and 3?**	The intent of using a suitable tape or backing strip for the longitudinal butt-weld (weld #1) of the encirclement sleeve is to prevent tying into the pipe wall and potentially burning through any corroded regions that could exist in the area of repair. This is implied in the "note" in paragraph D-1. The circumferential welds #2 and #3 could not have a backing strip by their nature of being a fillet weld between the sleeve and pipe being repaired. However, it is assumed that the sleeve is of sufficient length so that the fillet welds are made to sound pipe and burn through is less of an issue.
570	3rd Edition	5.6.2	570/10-01	**5.6.2 states that "CML's" should be marked on inspection drawings and on the piping system to allow repetitive measurements at the same CML's. Is it a requirement that CML's be physically marked on the pipe?**	API 570, 3rd edition clearly states that CML's should be marked on the inspection drawings and piping system. The word *should* is specifically defined in the API 570 foreword to denote a recommendation or that which is advised but not required in order to conform to the specification. It is not the intent of the code to prescribe exactly how records or locations of CML's are kept or identified by individual owner/users.
570	3rd Edition	6.1.6.5, Table 2	570/10-02	**In sections 6.2 and 6.5 the term 'representative sampling" is used. We believe this term to mean that we do NOT have to inspect every CML, but rather can selectively inspect a representative sampling of CMLs that we believe to best characteize the condition of the pipe. Can we select a representative sample of CMLs to include in our corrosion monitoring inspection program?.....and possible have some CML's that go uninspected for periods that may exceed the recommended maiximum intervals in Table 2?**	We believe you mean sections 6.1 and 6.5. The term "representative" means just what it says. The intent is to be able to assess the overall/corrosion trends. The word should is utilized representing a recommendation. It is not the intent that evey CML has to be actively measured if it is thought that corrosion can be adequately characteized by meansuring select or "representative" CML's.