

OPEN BOOK EXAMINATION
API 5L STANDARD (2007) PRACTICE QUESTIONS

Name :
Examination :

Date of

Please answer all the questions as below.

1. What edition ISO standards are added to API 5L?
ISO 3183 -1/2/3(1996)
2. How many specification levels in API 5L and what are they?
Two (PS1 & PS2)
3. What is the PSL stand for?
Product Specification Level
4. Which is more stringent PSL 1 or PSL 2?
PSL2
5. What additional mandatory requirements for PSL 2?
Chemical composition, notch toughness and strength properties and additional NDE
6. What kind of welding process is EW? **Electric Welding**
7. What is the formula for carbon equivalent for PSL 2 pipe with a product analysis carbon mass fraction equal to or less than 0.12% ?
 $CE = C + Si/30 + Mn/20 + Cu/20 + Ni/60 + Cr/20 + Mo/15 + V/10 + 5B$
8. What is the formula for carbon equivalent for PSL 2 pipe with a product analysis carbon mass fraction greater than 0.12% ?
 $CW = C + Mn/6 + (Cr + Mo + V) / 5 + (Ni + Cu)/15$
9. The seams of double-seam pipe shall be approximately 180°?
(True/False) **True**
10. Internal metal separation that creates layers, generally parallel to the pipe surface is called lamination? (True/False) **True**
11. What kind of general information to be supplied by the purchaser to the manufacturer which shall be included in the purchase order when ordering pipes?
Quantity, PSL level, type of pipe, reference to ISO 3183, steel grade, outside diameter and wall thickness, Length and type of length, confirmation of applicability of individual annexes.
12. The yield strength of API pipe grade B (seamless) is 35 500psi?
(True/False) **True**
13. The tensile strength of API pipe grade L485 or X 70 is 82 700psi?
(True/False) **True**

14. What is the minimum average (of a set of three test pieces) absorbed energy for each pipe weld and HAZ test, based upon full size test pieces and a test temperature of 0° C for diameter less than 56.000 in. in grades ≤ L555 or X80 ? **27J**
15. For Drop-Weight Tear (DWT) for PSL 2 welded pipe, what is the average shear fracture for each test based upon a test temperature of 0° C if thickness is less than 25.4mm? **≥ 85%**
16. All pipes shall be free from defects in the finished condition? (True/False) **True**
17. All pipes shall be free from cracks, sweats and leaks? (True/False) **True**
18. The acceptance criteria for imperfections found by non-destructive inspection shall be in accordance with Annex? **E**
19. Undercuts -≤0.4mm depth and regardless in SAW and COW pipes found by visual inspection is acceptable? **acceptable**
20. Is arc burns classified as defects? True or False. **True**
21. Laminations or inclusions extending into the face or bevel of the pipe and having a visually determined length in the circumferential direction > 6.4mm shall be classified as defects? True or False. **True**
22. For other than dents, geometric deviations from the normal cylindrical contour of the pipe (flat spots and peaks) that occur as a result of the pipe forming process or manufacturing operations and that exceeds 3.2mm in depth, measured as the gap between the extreme point of the deviation and the prolongation of the normal contour of the pipe, shall be considered defects? True or False. **True**
22. What is the maximum depth for sharp bottom gouges dent if the length of the dent is equal or less than 0.5D? **3.2mm**
23. What is the maximum depth for other dents if the length of the dent is equal or less than 0.5D? **6.4mm**
24. Any hard spot larger than 50mm in any direction shall be classified as a defect if its hardness exceeds 35HRC, 345HV10 or 327HBW, based upon individual indentations. True or False. **True**
26. Based on the defects, is it true that, the sections of the pipe containing the surface defects shall be cut off, within the limits on length? True or False. **True**

27. What is the diameter tolerance on end pipe for pipe diameter greater than 168.3mm.? $\pm 0.005D$ but maximum of $\pm 1.6\text{mm}$
28. What is the out-of-roundness tolerances for pipe end for pipe diameter greater than 168.3mm ? $0.015D$
29. What is the tolerance for wall thickness for 8mm seamless pipe (SMLS)? $+0.150t/-0.125t$.
30. The total deviation from a straight line (straightness), over the entire pipe length, shall be $\leq 0.2\%$ of the pipe length? True or False. **True**
31. The local deviation from a straight line (straightness) in the 1000mm portion at each pipe end shall be $\leq 4.0\text{mm}$? True or False. **True**
32. PSL pipe shall be furnished with plain ends? True or False. **True**
33. The out of squareness, measured for finish of plain ends shall be $\leq 1.6\text{mm}$? True or False. **True**
34. Unless otherwise agreed, the end faces of plain-end pipe with $t > 3.2\text{mm}$ shall be beveled for welding (bevel angle $30^\circ +5^\circ / -^\circ$ and width of the root face of the bevel shall be 1.6mm with a tolerance of $\pm 0.8\text{mm}$)? True or False. **True**
35. The outside flash shall be trimmed to an essentially flush condition for EW & LW pipes. True or False. **True**
36. The inside flash shall not extend above the contour of the pipe by more than 1.5mm EW & LW pipes. True or False. **True**
37. What is the tolerances for mass for pipe grade L175,L175P,A25 and A25P ? $+10\% -5.0\%$
38. What is the holding time for hydrostatic test for welded pipe $D > 457\text{mm}$? **not less than 10sec.**
39. The hydrostatic test pressure for plain –end pipe shall using what equation formula with results rounded to the nearest 10psi?
 $P = 2St/D$
40. Name the requirements of pipe markings found on completed pipe.
- Name or mark of manufacturer of the pipe.**
 - Specified outside diameter.**
 - Number designation of ISO 3183 plus, or alternatively, an identical national adoption of ISO if agreed.**
 - Specified wall thickness.**
 - Pipe steel grade**
 - Product specification level designation**
 - Type of pipe**
 - Mark of the customer's inspection representative**
 - An identification number which permits the correlation of the product or**

delivery unit with the related inspection document, if applicable.