

Path #1. API 653. In this path we will see 50 closed book questions to be studied for the API 653 Certification Examination

The following questions were extracted from the standards by me, or remembered by me or other students that took the exam before.

The format is a Q&A one, different from the multiple choice question format from other courses I have seen online. I prefer this method because it takes away all the clutter that leads to confusion when treating these standards. I advise you to copy this info and paste it in a spaced repetition software like Anki or Supermemo, as the Q&A format allows, and start studying right away. You could choose to print flashcards too. When days pass by, you will see who you remember all of the information with no problem.

- 1 Q: What is the minimum thickness for a tank floor plate with no means for leak detection or secondary containment if an RBI program is not in place?  
A: 0,1 inches Ref: Table 4.4 API 653
- 2 Q: When a full hydrostatic test is required, it shall be held for \_\_\_\_\_  
A: 24 hours. Ref: 12.3.1 API 653
- 3 Q: How many radiographs shall be taken in a square 12" x 24" butt welded insert plate in a 1" thickness shell?  
A: 100% Ref: 12.2.1.6.2 API 653
- 4 Q: Minimum number of radiographs that shall be taken to a circular butt welded insert plate in a shell 1/2" thick?  
A: 1 Ref: 12.2.1.6.1 API 653
- 5 Q: How much time do you need to keep the radiographs of a reconstructed tank?  
A: 1 year Ref: 13.2.3 API 653
- 6 Q: Who should conduct visual inspection and review NDE results?  
A: The authorized inspector Ref: 6.4.1.2 API 653

- 7 Q: How much time should the operator keep the cathodic protection records?  
A: 5 years Ref: 11.4.7 API 571
- 8 Q: Minimum diagnostic length of a radiograph is \_\_\_\_\_  
A: 6 inches Ref: 12.2.1.7 API 653
- 9 Q: The total metal loss divided by the period of time over which the metal loss occurred is the \_\_\_\_\_  
A: Corrosion rate Ref: 3.9 API 653
- 10 Q: The presence of rock under the steel bottom of an AST would have what effect  
A: Promote sever underside corrosion Ref: C.1.1.4 API 653
- 11 Q: When do you use thin film linings?  
A: When the tank is new or has light corrosion Ref: 6.1 API 652
- 12 Q: A formal visual external inspection by an Authorized Inspector shall be made  
A: at least every 5 years or RCA/4N years, Ref: 6.3.2.1 API 653  
whichever is less
- 13 Q: Radiographic film density shall be checked by a densitometer calibrated on a step wedge film traceable to  
A: A national standard Ref: T-262 ASME SEC V
- 14 Q: A welder deposits more weld metal than allowed by the WPS. What should be done?  
A: Re-qualify the welder Ref: ASME IX
- 15 Q: What is the maximum critical length for plate thickness determination?  
A: 40 inches Ref: 4.3.2.1 API 653
- 16 Q: When it is necessary hydrostatic test for a reconstructed tank?  
A: Always Ref: 12.3.1 API 653

- 17 Q: How much more corrosion rate do rafters and girders can get with respect to roofs and shells?  
A: Twice the speed Ref: 7.4.8 API 575
- 18 Q: Between Thin film and thick film linings, which lining is best for a crude oil tank that operates at 190F  
A: Thin-film Ref: 6 Tank Bottom Lining Selection API 652
- 19 Q: What is the maximum spacing for MT prods?  
A: 8 inches Ref: T-752.3 ASME SEC V
- 20 Q: What is the height of the lead symbol "B" that shall be attached to the back of each film holder during each exposure to determine if backscatter radiation is exposing the film?  
A: 1/2" Ref: T-223 ASME SEC V
- 21 Q: Any work on a tank that changes its physical dimensions or configuration is called an?  
A: Alteration Ref: 3.1 API 653
- 22 Q: Which annex of API 653 provides guides about Aboveground tanks inspector certification?  
A: Annex D Ref: API 653
- 23 Q: The maximum permissible limit for exposure to organic lead in a normal 8 hour work day is \_\_\_\_\_  
A: 2 micrograms of organic lead per cubic feet Ref: 3.2.38 API 2015
- 24 Q: The full course width for shell plate as per API 650 shall be minimum  
A: 72 in Ref: 9.3.1.7 API 653
- 25 Q: In accordance with API Standard 653, Critical Zone for repairs to a Tank Bottom is that portion, which is \_\_\_\_\_  
A: Measured radially inward, within 3" of the inside edge of shell. Ref: 3.10 API 653

- 26 Q: As per API Standard 653, a routine, in-service, visual external inspection of an above ground storage tank (AST) shall be done every \_\_\_\_\_  
A: 1 month Ref: 6.3.1.2 API 653
- 27 Q: How many types of authorized inspection agencies can exist?  
A: 4 types Ref: 3.3 API 653
- 28 Q: Who has the ultimate responsibility for complying with the provisions of API 653 standard?  
A: The owner/operator Ref: 1.2 API 653
- 29 Q: What RBI means?  
A: Risk Based Inspection Ref: 6.4.2.1 API 653
- 30 Q: Jacking of a tank is an alteration or a repair?  
A: A repair Ref: 3.24 API 653
- 31 Q: In which case is external inspection permitted in lieu of internal inspection?  
A: When you have access to the underside of the bottom Ref: 6.5 API 653
- 32 Q: A relocated tank needs hydrostatic testing?  
A: Yes
- 33 Q: Which NDE technique is used to fully check shell welds?  
A: Hydrostatic testing Ref: 12.3 API 653
- 34 Q: Reinforcement pad welds should be pneumatically tested at which pressure?  
A: 15 psig Ref: 7.3.4 API 650
- 35 Q: During a hydrostatic test, at least how many measurement points shall be surveyed?  
A: 8 points Ref: 12.5.1.2 API 653

- 36 Q: During a hydrostatic test for a new tank, at least how many measurement sets shall be taken?  
A: At least 6 sets Ref: 7.3.6.5 API 650
- 37 Q: Which types of tanks use windgirders?  
A: Open top tanks Ref: 5.9.1 API 650
- 38 Q: The total resistance from tank to earth should not exceed approximately \_\_\_\_\_  
A: 25 ohms Ref: 7.2.5 API 575
- 39 Q: Vacuum box testing requires how many psig of vacuum minimum?  
A: 3psig Ref: 8.6.3 API 650
- 40 Q: API 653 standard covers maintenance, repair, relocation and reconstruction of tanks constructed according to what standards?  
A: API 650 and API 12C Ref: 1.1.1 API 653
- 41 Q: Guided bend test are used to \_\_\_\_\_  
A: determine the degree of soundness and ductility of groove-weld joints Ref: QW-141.2 ASME IX
- 42 Q: Tension tests are used to \_\_\_\_\_  
A: to determine the ultimate strength of groove-weld joints Ref: QW-141.1 ASME IX
- 43 Q: How many tension tests are required for procedure qualification?  
A: 2 tension tests Ref: QW-450 SME IX
- 44 Q: Which NDE techniques are volumetric?  
A: Radiography and ultrasound Ref: QW-191 ASME IX
- 45 Q: Radiography can be used to qualify welding procedures and welder's performance?  
A: Yes Ref: QW-304 ASME IX
- 46 Q: Apart from 6G, which pipe position can be used to qualify a welder for all other positions?  
A: 2G and 5G Ref: QW-461.9 ASME IX

47 Q: The 1-foot method design shall not be used in tanks over which diameter?  
A: 200ft Ref: 5.6.3.1 API 650

48 Q: Maximum design internal pressure in an AST is not exceeding \_\_\_\_\_  
A: 2.5psig Ref: 5.2.1 API 650

49 Q: At which temperature risk of brittle fracture is considered minimal?  
A: 60F Ref: 5.3.6 API 653

50 Q: In case of tank shell thickness above 1/2", is there risk of brittle failure?  
A: No, it is minimal Ref: 5.3.5 API 653

For more information and more questions go to [www.apiexam.com](http://www.apiexam.com)