

API API-571 Exam

Volume: 454 Questions

Question No : 1

_____ is the main concern during start-up, shutdown and/or hydro testing for equipment/piping operating at elevated temperatures. This event can also occur in an auto refrigeration event in units processing light hydrocarbons.

- A. Stress fracture
- B. Carburization
- C. Spheroidization
- D. Brittle fracture

Answer: D

Question No : 2

Fatigue will not occur in carbon steel if stresses are below the:

- A. Transition limit.
- B. Endurance limit.
- C. Hardening limit.
- D. Speed limit.

Answer: B

Question No : 3

_____ has been a major problem on coke drum shells.

- A. Thermal fatigue
- B. Stress cracking
- C. Erosion
- D. Temper embrittlement

API API-571 Exam

Answer: A

Question No : 4

The "L" grade of stainless steels will sensitize if exposed more than several hours above _____ or long term above _____.

- A. 1200° F, 800° F
- B. 1000°, 600° F
- C. 1000° F, 750° F
- D. 1100° F, 800° F

Answer: C

Question No : 5

Once cracking from LME has occurred, grinding out the affected area _____ an acceptable fix.

- A. Is
- B. Is not
- C. Can be
- D. Can not be

Answer: B

Question No : 6

Ferritic stainless steels are usually not used in _____ applications.

- A. Non-pressure boundary
- B. Pressure boundary
- C. High temperature
- D. Low temperature

API API-571 Exam

Answer: B

Question No : 7

In general, the resistance of carbon steel and other alloys to High temperature corrosion is determined by the _____ content of the material.

- A. Molybdenum
- B. Chromium
- C. Carbon
- D. All of the above

Answer: B

Question No : 8

Conditions favoring carburization include a high gas phase carbon activity and _____ oxygen potential.

- A. Low
- B. High
- C. Negative
- D. Positive

Answer: A

Question No : 9

It is generally accepted that stresses approaching _____ are required for SCC to occur so that thermal stress relief is effective in preventing caustic SCC.

- A. MAWP
- B. Yield
- C. Creep range
- D. Critical

API API-571 Exam

Answer: B

Question No : 10

Low creep ductility is _____ severe in high tensile strength materials and welds.

- A. More
- B. Less
- C. Usually
- D. Not

Answer: A

Question No : 11

Many thermal fatigue cracks are filled with:

- A. chlorides.
- B. hydroslime.
- C. oxides.
- D. sulfides.

Answer: C

Question No : 12

Titanium Hydriding damage occurs primarily in sour water strippers and amine units in the overhead condensers, heat exchanger tubes and other titanium equipment operating above _____.

- A. 300° F
- B. 270° F
- C. 210° F
- D. 165° F

API API-571 Exam

Answer: D

Question No : 13

Heat treatment can have a significant effect on the toughness and hence fatigue resistance of a metal. In general, _____ grained microstructures tend to perform better than _____ grained.

- A. Fine, Course
- B. Austenetic, martensitic
- C. Course, Fine
- D. Martensitic, austenetic

Answer: A

Question No : 14

_____ is a form of environmental cracking that can initiate on the surface of high strength low alloy steels and carbon steels with highly localized zones of high hardness in the weld metal and HAZ as a result of exposure to aqueous HF acid service.

- A. Sulfide stress cracking
- B. Hydrogen stress cracking
- C. Caustic stress cracking
- D. Hydrogen induced cracking

Answer: B

Question No : 15

SOHIC is driven by localized stresses so that _____ is somewhat effective in preventing SOHIC damage.

- A. PWHT
- B. Preheat
- C. Temperature