Path #6. API 571. In this path we will see 25 closed book questions to be studied for the API 653 Certification Examination. They are all based on API 571, 4.3.8 – Microbiologically induced corrosion (MIC)

The following questions were extracted from the standards by me. 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.

The following questions correspond to Microbiologically Induced Corrosion. I´ve begun to make research and convert that into questions for you, as a way to make you really remember the knowledge. You will find that those questions have no reference

241. Q: Name of the form of corrosion caused by living organisms such as bacteria, algae or fungi.
A: Microbiologically Induced Corrosion (MIC) Ref: API 571 4.3.8.1

242. Q: How many types of materials can be affected by MIC?
A: 7 according to API 571 (and many others) Ref: API 571 4.3.8.2

243. Q: Which kinds of stainless steels are affected by MIC?
A: 300 series SS and 400 series SS Ref: API 571 4.3.8.2

244. Q: Inconel is an example of a metal that can be affected by MIC because it is a _____
A: Nickel base alloy

245. Q: Early jet aircraft fuel tanks were affected by MIC because they were made of _____
A: Aluminum

246. Q: Are cold water copper plumbing systems affected by microbiologically induced corrosion? Yes/No
A: Yes

247. Q: What is the single most critical factor that will contribute to MIC
A: Aqueous environment Ref: API 571 4.3.8.3

248. Q: Where is there more probability of MIC: Systems with high water flow or systems with low water flow?
A: Low water flow Ref: API 571 4.3.8.3

249. Q: Name three substances we as humans need that are needed by microorganisms to produce MIC
A: All organisms require a source of carbon, nitrogen and phosphorous for growth. Ref: API 571 4.3.8.3

250. Q: In-leakage of process contaminants such as hydrocarbons or H2S may lead to a massive increase/decrease in biofouling and corrosion.
A: Increase Ref: API 571 4.3.8.3

251. Q: MIC is the most common in _____ _____
A: Heat exchangers Ref: API 571 4.3.8.4

252. MIC is commoner in crude oil tank roofs that any other tank component. True/False
False. It is more common in tank bottoms Ref: API 571 4.3.8.4

253. Q: If the hydrotest water is not drained after use, it can lead to which equipment damage mechanism?
A: Microbiologically Induced Corrosion Ref: API 571 4.3.8.4

254. Q: MIC can cause rapid development of pinhole-sized leaks in _____ _____ _____
A: Fire water systems Ref: API 571 4.3.8.4

255. Q: Name of damage mechanism usually observed as localized pitting under

deposits or tubercles that shield organisms
A: MIC Ref: API 571 4.3.8.5

256. Q: In carbon steel, microbiologically induced corrosion damage is characterized by ____ _____ ____ ____ _____ pits within pits
A: Cup-shaped pits within pits Ref: API 571 4.3.8.5

257. Q: In stainless steels, microbiologically induced corrosion damage is characterized by _____ _____
A: Subsurface cavities Ref: API 571 4.3.8.5

258. Q: To avoid MIC, systems that contain water (cooling water, storage tanks, etc.) should be treated with _____
A: Biocides Ref: API 571 4.3.8.6

259. Q: Can you eliminate microorganisms using biocide only once in still water?
A: No. Continued treatment is necessary Ref: API 571 4.3.8.6

260. Q: Maintaining water flow velocities above minimum levels will avoid
A: Microbiologically induced corrosion Ref: API 571 4.3.8.6

261. Q: What should you do after draining hydrotest water to better improve the chances of getting no MIC?
A: Blow and dry the equipment Ref: API 571 4.3.8.6

262. Q: In systems not intended for water, you still have to keep equipment _____ ____ _____ in order to avoid Microbiologically induced corrosion
A: Clean and dry Ref: API 571 4.3.8.6

263. Q: A combination of pigging, blasting, chemical cleaning and biocide treatment is useful in _____ __ _____ _____
A: Mitigation of established organisms Ref: API 571 4.3.8.6

264. Q: Between UT, RT, MT, PT, which is mentioned in API 571 as a way to inspect for MIC?
A: None Ref: API 571 4.3.8.7

265. Q: Foul smelling water may be a sign of ___

A: Microbiologically induced corrosion MIC Ref: API 571 4.3.8.7

This pdf is part of a series of articles on API 653 questions. For more articles, see the following

1. Path #1
2. Path #2
3. Path #3
4. Path #4
5. Path #5

For more information and more questions go to www.apiexam.com