

API Source Inspector Electrical Equipment Sample Questions (Q40-Q45):

NEW QUESTION # 40

Who should the Source Inspector notify if they believe that product quality may be compromised by schedule pressures?

- A. The inspection coordinator
- B. Project Manager
- C. The shop QA Manager
- D. Master Scheduler

Answer: A

Explanation:

The correct answer is B. The inspection coordinator. In the API source inspection framework, the inspector's role is to independently observe, verify, document, and communicate quality-related concerns through the established inspection reporting chain. When schedule pressure appears likely to compromise product quality, the issue must be escalated to the inspection coordinator, because that person manages inspection execution, communication flow, and coordination between the purchaser, supplier, and inspection function. This keeps the inspector independent and ensures the concern is addressed formally rather than informally.

The other options are less appropriate. The Master Scheduler is responsible for planning and timing, not for controlling inspection escalation. The shop QA Manager belongs to the supplier's organization, so reporting directly there could weaken the inspector's independent reporting path. The Project Manager may ultimately need awareness, but the normal and correct first notification route in source inspection administration is through the inspection coordinator. This approach aligns with API source inspection practice, where quality threats, deviations, and risks are communicated through designated inspection channels so that corrective action, hold points, and surveillance priorities can be managed properly.

NEW QUESTION # 41

Areas where ignitable concentrations of flammable gases or vapors are present continuously or for long periods of time are classified as:

- A. Class I Zone 2.
- B. Class I Zone 0.
- C. Class I Zone 1.
- D. Class I Division 2.

Answer: B

Explanation:

The correct answer is A, Class I Zone 0. In hazardous-area classification, Class I refers to locations where flammable gases or vapors may be present in the atmosphere. Under the Zone system, Zone 0 is the classification used where an ignitable concentration is present continuously, for long periods, or frequently enough that it must be assumed to exist during normal conditions. This is the most severe gas-vapor zone classification because the hazardous atmosphere is expected to be present as part of normal operation. By contrast, Class I Zone 1 applies where flammable gas or vapor is likely to be present in normal operation, but not continuously for long periods. Class I Zone 2 applies where the hazardous atmosphere is not likely in normal operation and, if it does occur, it exists only for a short time. Class I Division 2 is also a less severe classification under the Division system, not the continuous-presence category.

From an API source inspection perspective, correct hazardous-area classification is critical because it governs the acceptable protection methods, enclosure types, markings, and certification requirements for electrical equipment installed in those areas.

NEW QUESTION # 42

Which of the following is primarily concerned with providing confidence that quality requirements will be fulfilled rather than detection and curing of problems?

- A. Quality control
- B. Quality planning
- C. Inspection
- D. Quality assurance

Answer: D

Explanation:

The correct answer is D because quality assurance is the function that focuses on giving confidence that the required level of quality will be achieved through planned and systematic activities. It is preventive in nature.

Rather than waiting for defects to appear and then detecting or correcting them, quality assurance establishes the framework of procedures, controls, audits, document management, qualification practices, and surveillance methods that help ensure the work is done correctly from the start.

By contrast, quality control is more directly associated with detection of defects and nonconformities through inspection, examination, and testing of the product or process output. Inspection is one part of quality control, not the broader confidence-building system. Quality planning is the activity of defining what standards, resources, acceptance criteria, and methods will be used, but it is not itself the ongoing function primarily described in the question.

In API-aligned source inspection practice, the inspector works within a quality system that relies on both assurance and control.

However, when the emphasis is on providing confidence that quality requirements will be fulfilled, the correct term is quality assurance, making option D the best answer.

NEW QUESTION # 43

According to API 541, prior to mechanical running test, each mounting foot shall be checked for "soft feet." How is this check conducted?

- A. Feeler gauges are used at the foot to base interface to verify gap tolerance has not been exceeded
- **B. After torquing mounting bolts, a vertically oriented, zeroed, dial indicator is attached to each foot and a reading taken after loosening of the bolt torque to verify movement is within tolerance**
- C. Mounting bolt torque is verified with a calibrated torque wrench with no visible gaps observed between the foot and base interface
- D. A dial indicator is oriented vertically and zeroed prior to base bolt tightening with a reading taken after tightening to confirm movement is within tolerance

Answer: B

Explanation:

The correct answer is B. In large motor inspection practice under API 541, a soft foot check is performed to confirm that all motor mounting feet sit properly on the base and that tightening or loosening the hold-down bolts does not distort the motor frame. The accepted method is to first have the mounting bolts tightened, then place a dial indicator vertically at the foot, zero the indicator, and observe the movement when the bolt torque is relieved or loosened. If the foot lifts or the frame shifts beyond the permitted tolerance, the condition indicates soft foot and must be corrected before the mechanical running test.

This matters because soft foot can introduce frame strain, misalignment, elevated vibration, bearing loading, and unreliable mechanical test results. In source inspection, the purpose is not merely to verify bolt tightness or visible fit-up, but to confirm that the machine is mounted without distortion under actual installed clamping conditions. Option A may reveal a gap but does not fully assess frame movement under bolt load. Option C reverses the usual verification sequence. Option D is inadequate because torque and visual appearance alone do not confirm absence of soft foot.

NEW QUESTION # 44

According to API 541, during a witness or observed test of a 500 hp kW induction motor, the purchaser shall have the right to observe all the following, which may occur due to the expected or unexpected part or event of the test except:

- **A. disassembly of the rotor.**
- B. inspection of the motor.
- C. reassembly of the motor.
- D. dismantling of the motor.

Answer: A

Explanation:

The correct answer is C. disassembly of the rotor. In API 541 witness or observed testing practice for large induction motors, the purchaser has the right to observe activities that may become necessary as part of the test process, including dismantling of the motor, inspection of the motor, and reassembly of the motor. These actions are directly related to investigating test issues, verifying construction, checking condition after a test event, and confirming that the motor is properly restored following inspection.

The rotor itself is normally treated as a major internal component of the motor, but disassembly of the rotor is not a standard purchaser observation right described in the same way. A rotor may be removed or examined if necessary, but "disassembly of the rotor" suggests taking apart the rotor assembly itself, which is not the expected wording or normal scope of witness rights during

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