

Updated July 2025 Questions

Function 4B – Maintenance & Repair at Operational Level

Surveyor: S.S. Gadkar

1. Type of Main Engine and explain all nomenclature.
2. What is meant by Compact type engine?
3. Explain the function of tie rod.
4. What checks do you carry out to detect slack tie rods?
5. What is the procedure for crankshaft deflection and why is it done?
6. Explain constructional and thermal efficiency difference between 2-stroke and 4-stroke engines.
7. How do you check trueness of shaft during overhaul?
8. Explain the overhaul procedure of Auxiliary Engine cylinder head.
9. How to remove exhaust valve, seat and guide from cylinder head?
10. Explain types of injection systems in engine.
11. What is VIT and why was it introduced?
12. Explain stuffing box construction and function.
13. What is the function of diaphragm in stuffing box?
14. Explain MAC (Main Air Compressor) overhaul procedure.
15. Explain Pilot burner overhaul procedure.
16. Explain CF (Centrifugal) pump overhaul procedure.
17. How to measure rudder drop?
18. What measuring tool is used for rudder clearance?
19. Explain Stern tube sealing arrangement.
20. Explain Top bracing and its purpose.
21. What is viscotherm?
22. Explain the procedure for boiler gauge glass overhaul.
23. Explain accumulation pressure test and hydraulic pressure test of boiler.
24. Explain holding down bolts and their inspection.
25. Explain thrust bearing inspection and checks.
26. How do you carry out crankcase inspection of AE?
27. Explain constructional difference between Purifier and Clarifier.
28. Explain the procedure for removing a propeller in drydock.
29. Explain how to remove valve seat during cylinder head overhauling.
30. Explain Boiler safety valve easing gear use.
31. Explain Boiler safeties in detail.

32. What is meant by Critical Speed in Main Engine?
33. Why is Critical Speed not seen in Auxiliary Engine?
34. Explain Alpha lubrication system and Pulse lubrication (Sulzer RTA).
35. Explain Boiler burner routines and maintenance procedure.
36. Explain types of Turbocharger washing.
37. Explain Liquid primer pump and its function.
38. What difficulties are faced with Cast Iron welding?
39. Explain constructional difference between Crosshead and Trunk type engines.