

## **UK MARINE TRAINING CENTRE (UMTC)**

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## **Class 1 Oral's Questions**

Date: 16 May 2024 Examiner: Vikas Kamble Candidate name: Sumit Velani Duration: 1Hr 10 mins Result: Pass

- 1. For what exam are you here for. (Chief Eng Unlimited III/2)
- 2. For Viva's where to get syllabus. (Min 654)
- 3. You must do main engine crosshead bearing inspection and class surveyor is coming tomorrow. What preparation would you be doing and what all things will you check and brief your engineers and crew.
- 4. Why will you check past records. What all are they going to tell us. (bearing Clearance & Crankshaft deflection)
- 5. Why you need crankshaft deflection record when you are checking crosshead bearings.
- 6. What all things are we checking in bearing. Type of bearing. Material, Clearance allowance. What are the effects and reasons for the same in bearing.
- As you mentioned Corrosion. How does it happen. Where will you see the effects. (As water in oil that Is the reason for the corrosion and due to this load carrying capacity will reduce, microbial attack will occur. How Microbial attacks starts and effects and action. What else due to water – TBN reduces)
- 8. As told to your 2/E to check lifting appliances. What all will they check. How wi;; you check.
- 9. How will we check the E/R crane with Dynamometer. Procedure and what all safeties will we check.
- 10. Are all Hydraulic Jack the same or is there a difference. How will you identify jack for crosshead bearing.
- **11.** How will you confirm if hydraulic jack is in good condition. What things do we check in pneumatic pump.
- 12. Explain the procedure for crosshead bearing removal.
- 13. Without hanging the piston can we check the bearing clearance. (Yes)
- 14. After dismounting top bearing how will you dismount the lower shell bearing.
- 15. Is there any difference between the top and lower shell bearing.
- 16. In crosshead pin how will you evaluate pin condition. (will check pin surface condition for scratches with white light led, calibrate ovality and with help of surface roughness gauge will check roughness.)
- 17. If you find crack on pi then, how will you confirm crack depth. (ultrasonic, MPI)
- 18. At what point do you carry out pin polishing. (For crosshead bearing as per manual 0.05 to 0.09 allowed if more than 0.1mm need to be polished.)



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- 19. If crack is deep, what will be your action. (If crack is deep then have to measure how much its penetrated in length, if less than 3mm then we can polish and reduce pin size and use undersize bearing, for this we have to contact maker and as well as class permission.)
- 20. If you use undersized bearing, then what changes you have to do. (Operate engine at lower loads)
- 21. You have constant type 2 Turbochargers on main engine and one of them is damaged what will be your action.
- 22. What extra things will run with it to avoid low load. (Generator, Auxiliary Blower, Boiler)
- 23. If you run continuously on low load what are the effects.
- 24. What is the effect of soot deposit on boiler tube. (If dry soot thn less chance of fire but heat transfer efficiency will reduce. If wet soot then flash point reduces so chances of uptake fire).
- 25. If boiler uptake fire how will you know. (Black dense soke, economizer outlet temp will gradually increase, spark from funnel, burning smell, paint will peel off)
- 26. What action will you take.
- 27. While vessel in mid sea and water is leaking inside, what is the indication and how will you repair tube.
- 28. Who will weld plug. Which type of welding will you use. How will you know if fitter is a certifies welder. (Fitter certificate with class approval)
- 29. Your vessel is doing short voyage frequently, and there is no time for boiler maintenance, then what instructions will you give to the E/R team.
- 30. Vessel just dock on block and you have to go for bottom inspection for that how will you prepare and what things have to follow.
- 31. After getting permission from dock master and ready for for bottom inspection what first thing will you inspect and why.
- 32. What all things will you check on rudder and why.
- 33. How will you check rudder integrity.
- 34. If rudder plate needs to be renewed, for that what action and how repair things start to end explain.
- 35. Propeller checks, which ndt test, why not mpi test on propeller, what material propeller made up, for crack repair requirement and what all observation as C/E you will follow.
- 36. If Stern tube chrome liner found to have deep grooving what action will you take.
- 37. What is maximum stern tube bearing clearances.
- For stern tube bearing alignment which process used. (fair curve graph, laser method or jack up method)
- 39. If you found big dent on bulbous bow, what action will you take.
- 40. Checks on bow truster, Anchor chains, Sea chest.
- 41. For big motors like bow thrusters, what kind of starters are used.
- 42. How soft starter works.
- 43. For high voltage system what are safeties.
- 44. How to isolate circuit breaker.
- 45. What are things to check in high voltage circuit.



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- 46. Who is competent person and authorized person.
- 47. Tell me about all certificates. (you missed which imp for insurance- Wreak certificate)
- 48. What is the difference in passenger vessel and cargo vessel certificates.