AMSA CLASS 1 MOTOR ORAL EXAM

Examiner: Mr Kin Yum, Fremantle
Candidate:
Duration: 2 hours
Result: PASS – 1st Attempt

• MANAGEMENT & REGULATIONS

- You are Chief Engineer & you join a ship that you haven't been on before. The last Chief left the ship in a hurry. What documents would you check before you sail to ensure the ship is safe and seaworthy?

- What information is on the IOPP certificate?

- The ship takes on bunkers before you sail. What documentation must you prepare and retain?

- What else must you retain? (Bunker sample)

- How long do you retain it?

- What information is on the IAPP certificate?

- Your ship will be sailing through Antarctic waters. What preparations must you make?

- What other certificates might relate specifically to the engine room? (International Sewage Pollution Prevention Certificate)

- Describe a sewage treatment plant you have worked on.

- How did it break down and disinfect the sewage?

- What maintenance do you complete on this sewage treatment plant?

- How do you know it is operating correctly?

• DRY DOCKING

- Your ship will be sailing to dry dock. What preparations do you make?

- Why is the docking plan important? Why is the arrangement of the blocks important?

- How do you know the docking plan kept aboard is correct? What if this was the plan of a sister ship? Where would you like to see the blocks?

- Why slight aft trim?

- What safety concerns do you have with divers in the water before the dock is pumped out?

- What safety concerns do you have for the ship?
- How do you ensure the safety of the ship?

- How do you know the dock is supplying the correct voltage and frequency shore power to your ship?

- The distribution board is miles away. How else can you check?

- How do you know the shore power cable has been connected to the correct phases on your switch board?

- How will the dock charge the ship’s fire main?

**FIRE FIGHTING**

- Draw and explain the international shore connection.

- What safety devices are on the fire main?

- There is a serious fire in the engine room. What damage can occur to the fire main?

- How do you operate a fixed CO₂ system?

- How many release points are there?

- The pilot system has failed. How do you release CO₂?

- Why is it important to open the main isolating valve first?

- How do you know the bottles have emptied?

- How do you instruct a team of men to check if the CO₂ has released successfully?

- Do you trust the CO₂ Room fan to be operating properly?

- Draw a cross section of a CO₂ extinguisher. Point out the safety features.

- Why does it have a dip tube? Why does it have a large discharge horn? Why does the bottom of the extinguisher have such a design? *(I drew a concave bottom)* How do you instruct someone to use an extinguisher?

**DIESELS**

- You are in your cabin and a junior engineer calls you saying he suspects a M/E scavenger fire is in progress. What do you do?

- What are the indications of a scavenger fire?

- What action do you take?

- It was a minor fire and you continue sailing. Two hours later another fire starts. What action do you take?
- What safety features are on a M/E air start system?

- Where do you find flame arrestors and bursting discs?

- How does a flame arrestor work?

- What are bursting discs for?

- What are the components that are difficult to lubricate?

- How is the cross head lubricated? What features does it have?

- What other areas are difficult to lubricate?

- How is cylinder lube oil different to the bearing lube oil?

- How do you know you are using the correct cylinder lube oil for the type of fuel oil you are burning?

**BOILERS**

- How do you prepare for a boiler survey?

- How do you prepare the boiler for entry?

- Draw a boiler man hole door.

- How do you open a manhole door?

- What are you most concerned about during the boiler entry.

- What documentation do you complete before anyone enters the boiler?

- What is the main requirement of confined space entry regarding the Occupational Health and Safety Act (Maritime Industry)?

**ELECTRICAL**

- What safety devices are found on the main switch board?

- How do you manually synchronise two generators?

- How can you synchronise if the synchroscope fails?

- Draw and explain a synchronising lamps circuit. When are the generators synchronised?

- Why is there an interlock between the main and emergency switchboards?

- How does a Reverse Power trip work? Why have one?