My Orals 7-7-11
90 min, was horrible... but passed.

- S&D ships bilge system, explain bilge main, reason for screw down non return v/v’s on bilge tanks
  (SKETCH)
- Bilge p/p manifold and type of p/p used (mono screw, pos displacement)
- Explain difference between pos displacement & centrifugal pumps
  (REMOVAL AND OVERHAUL)
- S&D OWS, wanted to know operation, how to start up and stop etc. Explained
  MV11 doesn’t use one, (decommissioned and out of survey) used two stage as per
  AMC notes. Wanted to know how the oil separates, coalesced, surface tension
  etc.
- Explain Oil Content Monitor and three-way v/v. Dug myself a hole with the
  calibration of the unit. Explain MARPOL regs regarding oil discharge.
- Explain Oil record book. (MAKE ENTRY)
- Explain emergency fire & GS pump system (how it is connected to bilge main
  and direct bilge suction) and main engine SW cooling p/p emergency bilge
  arrangement (independent vacuum p/p etc)
- List fire extinguishers, S&D portable CO2 extinguisher, explain why pick up tube
  goes to bottom etc. (SKETCH)
- Explain fixed CO2 system, pilot bottles, starting bottles and main bank etc.
  (HOW TO USE FIRE EXTINGUISHER)
- Explain why piping diameter reduces further down the system.
- You have a fire broken out on the boiler tops, as duty watchkeeper, what do you
  do: went into shut down burners/ fuel pumps, raise alarm etc. If small fire, take
  portable CO2 ext from ECR and make attempt to extinguish. Big fire, exit E/R.
- Went into uptake fires (boiler) etc. How do you determine, course of action etc.
- Went into scav space fires, How do you determine, course of action, spreading to
  economiser etc.
- Crank case explosions, protection devices. S&D crank case explosions door.
  What to look for during rounds (oil leaking indicates valve not seated correctly)
- S&D OMD, explain operation and action due to alarm.
- S&D air receiver fittings and safety devices. Went into elongated manhole door
  and where it is positioned and why. Talked about removal etc, and stresses in the
  shell, longitudinal vs transverse shell strength (although more for boiler drums).
- S&D a two stage compressor and safety devices, why etc.
- Briefly covered start air fires. (CHLORIDES)
- Boiler water tests, what to test for and method. Test chemicals used and process
  (PROCEDURE TO SHUT DOWN BOILER FOR SURVEY)
- S&D 7 bar fire tube boiler with mountings, explain ogee ring.
- S&D LP gauge glass and method for blow down. Explain safety features. Went
  into scenario; can’t see level after blowing down, said to stop burner and blow
  down again, kept probing so I eventually said if you can’t see the water level in
  the gauge, you can’t prove the boiler level. Must shut down and inspect...
- Went into scenario; oil in the gauge glass. Said stop burner, set steam services to
  dump, scum, blow gauge glass, check atmos drains tank sight glass.
- Explain OH&S regulations, Started talking about ISM, and company SMS etc but
  he said NO! I didn’t really understand the question and dotted around talking
  about duty of care and FMS etc but basically drew a blank. Think he was talking
  about the OH&S maritime inspectorate but I hadn’t studied it at all... I was ready
  for the pineapple but he passed me. Said I need to know OWS and OH&S inside
  out before I do 2nd s/Chiefs. Told him I loved him.

EARTH FAULTS
2 STROKE DIESEL