

CE ORALS

EAXAMINERS: - Mr. Pujitha Herath.

Mr. Chandimal Jayatilaka.

CANDIDATE: - P.S. Gomes 1<sup>st</sup> attempt Pass

02.04.2013, 13:40 – 16:15

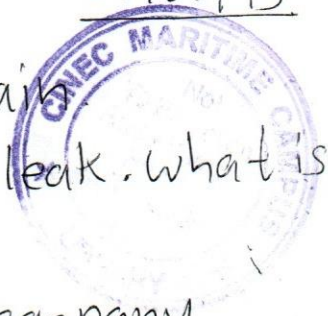


1. What is your last company.
2. How do you know your company ISM certified company.
3. What are ISM elements.
4. How do you implement the ISM.
5. Who is DPA and what his role is.
6. How do you carry out ISM audit.
7. CE role to ISM.
8. Your company brought old ship you are joining as CE how you know ISM was properly implemented.
9. What inspection do you carry out as CE.
10. How do you report accident according to your ISM.
11. How do you review ISM.
12. How do you know ISM functioning onboard.
13. How company knows ISM functioning on-board.
14. Explain Port state/ Flag state.
15. How does Sri Lanka implement the conventions.
16. How many msn in last year and what.
17. IMO committees and what are they.
18. What is the role of IMO.
19. How it is ratified, % of the countries.
20. Manila amendments.
21. MLC.
22. How connect it to ISM.
23. Manila to ISM.
24. Dry dock preparation.
25. AS CE what instructions you are giving to 2E before dry dock.
26. What kind of instructions you are giving to EO before entry to dry dock.
27. How do you perform rudder survey.
28. Steering gear repairs and maintenance done during dry dock.
29. How do you measure carrier bearing wear down/draw/ limits.
30. How often the dry docking. (Why 7.5 yrs.)
31. Boiler tube plate/tube material.

32. BLR corrosion.(types explain)
33. How it happen.
34. Galvanic corrosion.
35. Mill scale. Define it.
36. How minimize blr corrosion.
37. What is caustic embrittlement/ happens.
38. How do you identify the caustic embrittlement.
39. How do you control TDS/priming/Foaming.
40. Power distribution system.
41. Adv. of insulated earth system.
42. Earth system where you find it.
43. Explain single phase motor.
44. How do you run it without capacitor.
45. Crew member got electrocuted what is your action.
46. Fault fire alarm during night, what is your action.
47. What instruction you are giving to EO.
48. What is your action.
49. FIVA valve function.
50. If FIVA valve fails what will happen.
51. How do you run with failed FIVA v/v.
52. What happen to cyl lo.
53. What do you do.



D.D.N. Wijetunge

- 
- 1) Draw Boiler automatic control & Explain
  - 2) Boiler furnace inside fire due to fuel leak. What is your action as chief eng?
  - 3) How you extinguish the fire? What is company procedure to handle fire?
  - 4) What safety are you check now?
  - 5) What instruction survey is given to chief Eng before going to boiler inspection?
  - 6) What documents do you check (survey)
  - 7) As a chief eng how you inspection carried out (internal)
  - 8) Which areas you have to concern (internal inspection)
  - 9) Found one boiler tube leak. What is your action
  - 10) What survey decide now?
  - 11) How to blank boiler tube? draw it?
  - 12) Can you run the boiler as same pressure now?
  - 13) How the survey decide run the boiler now? Is the same pressure
  - 14) What is the Hyd pressure test value.
  - 15) Which areas you have to concern in boiler mountings during inspection.
  - 16) What is compensating ring
  - 17) What we check compensating ring during inspection.
  - 18) What we check in mounting bolts?
  - 19) How you train the Electrical officer? (we have to train him short period)
  - 20) How you ~~hand~~<sup>take</sup> over during dry dock
  - 21) In dry dock now what you consider take over
  - 22) What are the instruction given to Electrical officer in UMS operation ship

- 1) Can you isolate the fire alarm?
- 2) What condition can isolate fire alarm.
- 3) Draw the midship construction in your ship.  
(Container)
- 4) Which points we have to consider in stress?
- 5) What is torsion box? Why there have torsion box?
- 6) The container now change cargo ship. Now which areas do you concern?
- 7) How the side shell strengthening?
- 8) What is the length in side shell stiffeners? There is minimum standard length? \* 1
- 9) What is "face side" in stiffeners? \* 1
- 10) Above Boiler furnace fire what is chief eng report?
- 11) What topics include incident investigation report?  
Tell the proper technical terms \* 1
- 12) What is root cause analysis
- 13) The ship motor burn, ~~now start~~ Now tell the procedure of root cause analysis \* 1
- 14) Explain fish born method \* 1
- 15) Explain any of your method for root cause analysis..
- 16) During dry dock what is critical period.
- 17) How the ship structure (aft end) strengthen for this.
- 18) Draw & explain.
- 19) What is role of chief eng as a safety officer.
- 20) How he report this safety rounds? How often you have to send this safety rounds report?.
- 21) What is Alborg propeller material? Explain composition
- 22) Carbon composition of cast iron, mild steel, cast steel
- 23) What is Nitriding?
- 24) What are the ship board switch gear.
- 25) Draw explain preferential trip
- 26) What, important of dash pot

aggressive behavior of 3rd engineer? what is your action. Explain procedure

which reports do you send company? \*

ISM elements?

SOLAS chapters? what is chapter IX?

Role of IMO?

what is MLC 2006? what is Manila amendment for stow

what is the aim of Manila amendment?

what is minimum age & what requirement consider for them

what is IMO Committees

How you depressure the fuel system of RT flex? Explain with whole <sup>General</sup> construction.

How the fuel pressure increase up to 100 bar.

How the slow steam carried on RT flex.

what is difference RT flex & ME engine.

~~How~~ one card malfunction. How you replace RT flex ME engine. How do you do this (precautions).

How the flag state information goes?

What defects/faults you experienced in Himsen Aux engine?

what is about its turbocharger failure?

what is destructive & Nondestructive test?

Give the Examples.

Aux Engine scavenge Drain V/V chalk? Now what happen?

06/2013.

Boiler furnace fire what safety are you check as a chief engineer.

Explain Boiler survey. Management answer.

Why you take Immobilization certificate

what requirements company superintendent have to fully fill while take Immobilization certificate.



- 2) Explain properly How you train person on your vessel
- 3) In Dry dock as chief eng how you ~~hand over~~ take over
- 4) Explain "Bar chart" ~~How do you add the~~  
In detail? How can you add jobs for this?  
As a chief eng aft dry dock what do you consider ~~valve~~ bunkers?  
Which equipment you check from hand over? give example?  
Tomorrow 10.30 ship flooding how you plan to do this? with assist deck/eng crew?  
What do you check during flooding?  
Prior to flooding what you check on hull?  
prior to flooding what you check on deck  
what do you check with ship yard Manager ~~on~~ inside the dock?  
What is Ballast water Management? explain  
what is Hybrid turbocharger? explain.  
Explain S.F.O. specific fuel oil consumption. why this is important.

AMINERS :- Mr PWITHA HERAT.

Mr CANDIMAL JAYATILAKA



CANDIDATE :- P.S. GOMES

- ①. what is your last company.
- ②. How do you know your company is ISM certified.
- ③. ISM elements.
- ④. How do you implement the ISM.
- ⑤. DPA roles.
- ⑥. AS CE how you carry out ISM Audit.
- ⑦. Port state / flag state.
- ⑧. How SL implements any convention.
- ⑨. How many MSP last year / what are those.
- ⑩. Company bought old ship, you join as CE how you ensure ISM was followed and what is your action.
- ⑪. How do you report accidents.
- ⑫. How know your company knows ISM is function-ing on board.
- ⑬. How do you review it.
- ⑭. IMO committees / IMO role.
- ⑮. How any convention / law ratified.
- ⑯. MANILA / MLC related to ISM. (MLC / MANILA)
- ⑰.

- 18 min age.
- 19 Dry dock preparation.
- 20 what instruction to 2/E before entering dd
- 21 for E/O. before entry.
- 22 How often d/d.
- 23 rudder survey as C/E.
- 24 st. gear maintenance in d/d.
- 25 blr tube plate / tube material.
- 26 blr corrosion / how it happen.
- 27 galvanic corrosion / Dfine mill scale.
- 28 How do you minimise blr corrosion.
- 29 How do you control, TDS / priming, foaming.
- 30 Caustic embrittlement / How to identified.
- 31 Power Distribution.
- 32 adv of insulated earth.
- 33 earth systems where do you find.
- 34 single phase motor / How can run without cap.
- 35 crew member electrified what is the action
- 36 Fault fire alarm during night / action.
- 37 instruction to E/O. [fault finding].  
[Explained my action, also]
- 38 FIVA V/V Function and what happen when fails.
- 39 what happend to cyl 6.
- 40 what do you do.



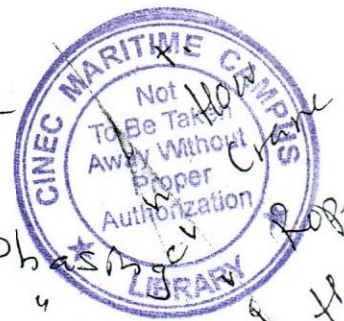
Examiners Mr. P. Herath 2.45 more B.S.N. Kumarasiri  
Mr. C. Jayatilaka. Come ~~after~~ after 2 weeks. 01/04/2013

1. What is your Company.  
2. How do you prepare for the IAPP Certificate renewal survey while you are in Dry dock.

- 3. Preparation for dry dock.
- 4. Work list for Dry dock Job.
- 5. What are the special things that you mentioned in work list
- 6. Non technical file
- 7. UMS requirements
- 8. What are the detection types used in F/R
- 9. Draw and explain Heat detector.
- 10. Draw and explain Automatic control Sy<sup>m</sup> of boiler
- 11. C/E responsibilities according to Company requirement
- 12. How do you improve ~~the~~ SMS on board.
- 13. Bunker Procedure from Suez to Japan.
- 14. Dry docking critical period.
- 15. How Aft end Casinet ~~for~~ with stand edge loading in dry dock.
- 16. Power calculation, whether correct or not.
- 17. How do you confirm your calculation is correct or not.
- 18. What are the other parameters you may consider.
- 19. CCAI /  $\uparrow \downarrow$
- 20. Draw and explain injection by using Dra or card.
- 21. fault alarm in fire detector sy<sup>m</sup> what you give instruction to the EE.
- 22. Boiler Corrosion. How does occur galvanic corrosion.
- 23. Galva How occurred Galvanic corrosion in the Boiler
- 24. different ... the boiler.



- 10 PASS structure what's the safety committee's functions of it: Role of the IMO.
- 3) If company get a old ship, how u implement DPA Role? & How it is join to ISM; MLC & Manila amendment
  - 4) How you improve SMS of your company.
  - 5) FIVA valve function
  - 6) How you control injection with FIVA valve
  - 7) Why electronic engines introduced.
  - 8) switch board protection.
  - 9) what kind of distribution on board (insulated earth).
  - 10) How to calculate NER (normal earth resistor).
  - 11) Ism functional requirements, Interim Certificate, Elements
  - 12) How u know ISM is functioning on board.
  - 13) How ISM will combined with MLC
  - 14) MLC cabin size?
  - 15) What u do if CCA unit failure
  - 16) How you change CCA unit? Is it possible to change it when the engine is in operation.
  - 17) Fire detector Types? & Installed places.
  - 18) If fire false alarm comes in midnight in OMS condition in fire detector, what your actions.
  - 19) DMLC 1 & DMLC 2 explain -
  - 20) Insurer survey requirements? How its going to 7.5 years? what requirements
  - 21) How to measure rudder wear dam
  - 22) steering Rudder survey gear. (Lubrication, filter clean etc).
  - 23) How to check steering gear. (Galvanic, castic environment)
  - 24) Boiler Corrosion A & B
  - 25) Boiler Corrosion A & B



what is the difference bet<sup>n</sup> flag state inspection and port state inspection.

what is single phasing.

what are the indications of single phasing.

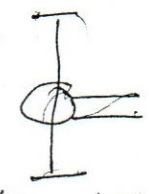
what are the safeties for single

Different bet<sup>n</sup> I & V transformer

what is M abtices

Recent MSN

High voltage Isolating sy<sup>st</sup>.



what are the instructions you give to E/E when connecting shore supply.

oil consumption high what are the adverse effect.

what is the critical period.

How aft end construction strengthen the for withstand High load. while DO.

Requirements for IN water survey.

what is high resistance cat former paint.

Hinged - Sea grids. why.

C/E Night orders.

steering gear Regulation.

- Mechanical
- Power supply.
- Alarm/SD.

Night time fire fault alarm coming / what is your instruction for E/E.

what are the matters concerning to Management meeting.

How do you take over ship as C/E.

Manila amendments Rest hrs. Min<sup>m</sup> age. etc.

Boiler component material..

Locking Test + Flushing  
for survey.

Mahendra  
08/04/13

How you prepare Crane

How check Joy stick? what you check?

Crane alarms & shed downs how to check.  
& limits?

Rope Test.

How you flood CO<sub>2</sub> into E/R.

~~What you propose~~ what type of air compress you proposed  
to installed on board.

Propeller shaft survey.

Brief explain ISM.

How to ensure another OAS condition is working on board

ORB new entries.

CH-4 manual collection.  
write D.

PV & High velocity

vent difference

Insurance claim

firmest



## Boiler

30. How do you make sure boiler water treatment done correctly,
31. Type of boiler corrosion
32. What is galvanic corrosion.
33. What is copper plating. / effect of copper plating.
34. Particular sensitive area → ~~exp~~ example.
34. What are the instructions are you going to give 3<sup>rd</sup> engineer to operate boiler in SECA area.
35. What is your instructions to 3<sup>rd</sup> for operating boiler when alongside the vessel
36. Which details are you going to received before along side the vessel
37. Boiler furnace plating is ~~bulge~~ bulge what is your action
38. How do you derate the boiler.
39. How do you bulging is assessed
40. What is UMS requirements. / Requirements for fire safety.
41. What is your instruction for E/E to give in Saturday morning.
42. SOLAS requirement for E/F/P.
43. Emergency fire pump location.
44. Why collision bulkhead is there.
45. How pipe pass through the collision bulkhead.
46. What is critical r.p.m. // How do you calculate critical r.p.m when unit is cut off.
47. How do you ~~calculate~~ <sup>calculate</sup> specific fuel oil consumption.

10/03/2013

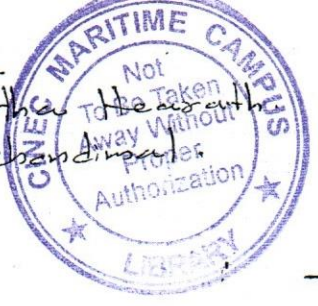
10/03/2013

SANSEWA YADA - CLASS - I

Examiners:

Mr. Pujitha

Mr. Chandrashekar



- (1) Why ISM was introduced?
- (2) What are the ISM: Element?
- (3) What are the new regulation coming under maritime amendment.
- (4) Newly joining E/E is not qualified what you do as chief engineer?
- (5) ~~How~~ what is MLC 2006 and describe?
- (6) what are the boiler water treatment why required?
- (7) what is the consequence of excessive  $N_2H_2$  in boiler water?
- (8) what is the construction of a boiler tubes to tube plate? (Explain <sup>for</sup> low pressure and high pressure boilers.)
- (9) One boiler tube is leaking what is your action as chief engineer?
- (10) S/E informing that M/E intermediate bearing getting high temperature alarm what is your action as C/E?
- (11) what are the checks that you are carrying out during running and after stopping.
- (12) Bearing is damaged what is your plan?
- (13) How you prevent further happening this situation to other ship in fleet?
- (14) How you carry out proper risk assessment? (Draw and explain.)?
- (15) what is the procedure of reporting near misses in your company?
- (16) Explain permit to work for high voltage electrical system?
- (17) How you carry out M/E lube oil pump maintenance.
- (18) Draw a air circuit breaker? (mainly inner arc chut and contacting surfaces.)

119) what is the insulation media on cct. breakers?

120) ~~Your power management~~  
During voyage suddenly start ballast pump what is happening?

121) what is power management system and how it is working?

122) PMS is out of order what is your action as C/E?

123) your Accommodation A/C compressor is stop starting abnormally what is your action?

124) How is you are determine that the A/C compressor is working satisfactorily?

125) what are the surveys which ships are subjected when it is constructed time?

126) what is class renewal survey and how you repair as C/E?

127) what are the special tools that you are preparing?

128) How you carry out propeller jump out and push up?

129) what are the checks that you carry on the shaft and locations? (tail end change of sect. MPI, end thrust).

130) what are checks on propeller blades?

131) what is the important of coefficient of friction between propeller boss and taper ( $\mu > 0.16$ ).

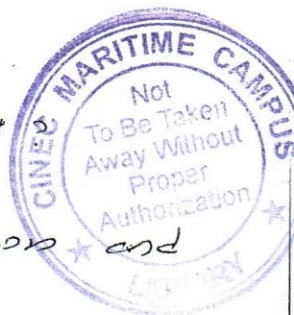
132) How you evaluate it?

133) what is the important of propeller nut? Is it important?

134) what is the regulation behind it?

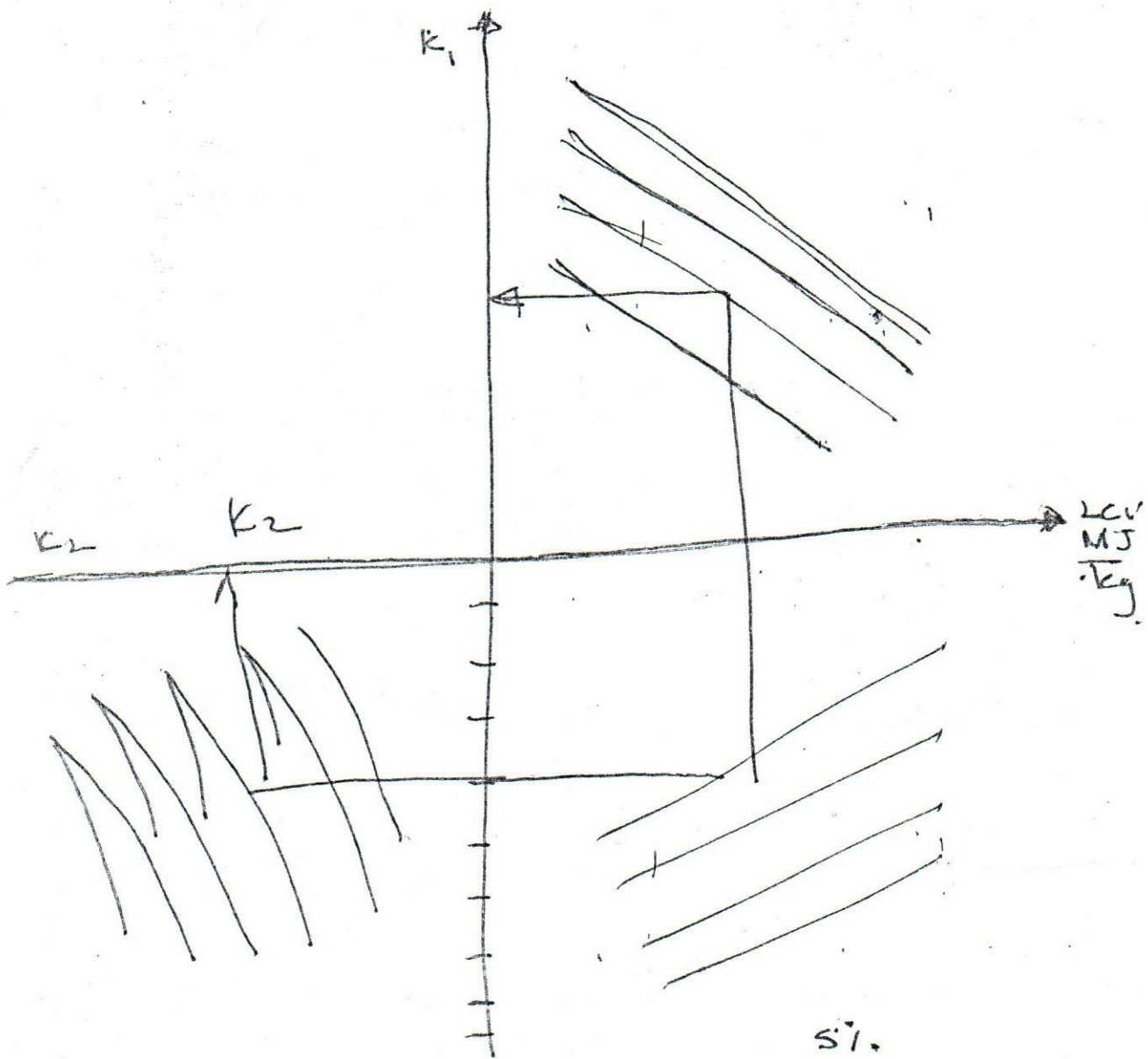
(2.7 ahead, 2.2 + Full load with out nut with sea going speed.)





- 1.37) How controllable pitch propeller is working  
How blade is rotating and draws?  
what is fail safe and fail set operation and  
what is in cpp?
- 1.38) when ship operating such a condition how it can  
be reverse?
- 1.39) what are the required of vms operation?
- 1.40) How seat fire is occurred, and what are the  
consequences?
- 1.41) During such an incident what is your action?
- 1.42) what do you mean by drenching?
- 1.43) what is the drencher system in ~~passenger~~ car carriers?
- 1.45) How car carrier has minimise fire sustane effect?
- 1.46) what type of pump are used in car carrier drencher  
systems?

Scav T + BR Temp.

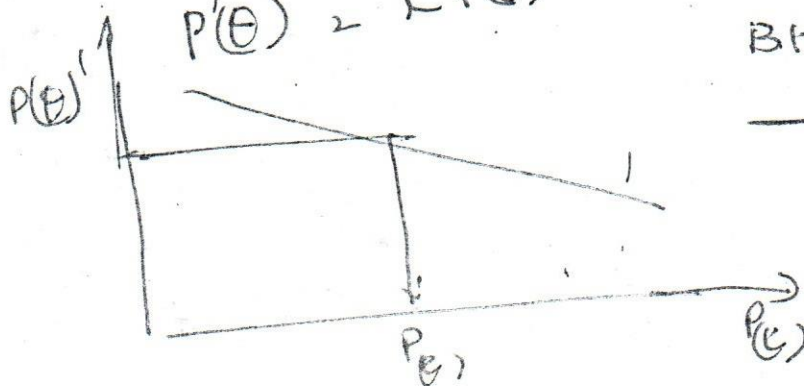


Temp. B4 Fuel  
PIP.

SS  $kg/m^3$

$$K_2 = K_1 \times K_2 \times SS$$

$$P'(\theta) = K P(\theta) PIP.$$



$$BHP = CP \theta N$$

Date ÷ 06/06/2013

Chief engineer oral

Examin ÷ Mr: Poojitha Herath

Mr: Bandula karuwana.

Time ÷ 13<sup>00</sup> - 15 45

~~Selection~~ \*

Candidate ÷ Nilupul Buddhika.

Result ÷ Pass.

01. Mandatory elements of IMO.
02. IMO structure.
03. What is the role of member state.
04. What is the sub committee ~~at~~ function.
05. What is the function of MEPC.
06. How to make ~~a law~~ marine law.
07. What is MLC.
08. What are the aims.
08. Requirements of MLC.
09. What is the minimum age limit.
10. Under the minimum age what regulation required for young crew member.
11. What is the manila amendment.
12. Under the manila amendment what required for electrical officer
13. How electrical officer make become as a competent person.
14. Which day rule applied.
15. What is the ums requirements.
16. What are the critical spare parts on board.
17. What is the minimum spares on board.
18. What different between minimum spares and critical spares.
19. How you groom second engineer on C/E position within 02 months period.
20. What is mill certificate and what included.
21. What composition included, in cast iron, cast steel and mild steel.
22. What is case hardening.
23. What is nitriding and different both case hardening and nitriding.
24. What component in engine ~~case hardening~~ nitriding.
25. How is the Aft end construction.
26. What forces act on aft end construction.
27. What is the critical period.
28. What is neutral earth system and insulated ~~earth~~ <sup>neutral</sup> system.

29. What are the application for NES and INS.
30. How you prepared boiler for internal inspection (renewal survey)
31. What safety precaution you must obtain.
32. What are the endangers things you should have to considered.
33. What are the checks you carried out before commencing the survey.
34. What test you should do for the safety valve and what are the measurement take on it
35. What special things mark on safety valve.
36. What is the certificate and what included in safety valve.
37. After finish your boiler survey now you are almost final stage but your agent inform you to sail out before the ETD but your work in progress just after sail out you are in pirates area. and Captain doesn't like to drop the anchor How you handle the situation.
38. What is the plan and given instruction to master.
39. What will be the hopes of Captain. From engine department.
40. What is the limits for crane hook wear-downs.
41. How you ready for screw shaft survey.
42. How you calculate S.F.O.C.
43. How you calculate the correction ~~for~~ density factor.
44. <sup>From</sup> Where you take the fuel oil temperature.
45. If there is no any flow meter how can calculate the fuel oil consumption.
46. How you calculate the ~~power~~ engine power.
47. How can you make sure that power is within limit.
48. Where the marpol regulation and main engine is combined.
49. Now your company introduce ~~new~~ other lab oil ~~production~~ brand. instead of old brand. ~~to use and change the~~ how you comply to that.
50. How you change the system oil what checks before change system.
51. What is trend analysis.
52. What are the regulation for steering gear.
53. What are the regulation for Emergency generator.
54. What are the alarm for steering systems.
55. What is hydraulic lock alarm.
56. What purpose of doing emergency steering and what intervals.
- 53.1. How much fuel required for e. generator for cargo vessel &

**Class 1 Engineering orals.**

**Candidate: Vipul Attanayake.**

**Examiner : Mr. Leslie Hemachandra.**

First day- 23.03.2012

- 1.General questions from project report.
- 2.what is WECS engine control system?
- 3.In case one of FCM 20 failure what will you do?
4. What is annex vi Tier I,ii,iii?
5. What is marpol annex vi ?
- 6.Who issue the type approval certificate for incinerator?
- 7.How does your last ship M/E comply with Marpol annex vi?
- 8.How do you check fuel inj. Timing in sulzer?
9. Draw accumulated type wet lubricator quill.

Second day-28.03.2012

- 1.Company ask you to join as C/E how are you take over the vessel?
- 2.How are you order the fuel?
- 3.How much the reserve F.O./D.O for the vessel?
- 4.How much the safe margin of F.O. for a tank?
5. On the voyage charterer ask you to go another port which take more 4-5 days. How do you reply?
- 6.How are you implementing ISM onboard?
- 7.What are the PSC detainable items under ISM?
- 8.Write down five detainable items by PSC?
- 9.What are the new conventions from IMO regarding prevention of pollution?
- 10.How are you passing the office instruction/information to your ships staff?
- 11.Explain your vessel emerg. Steering drill procedure?
12. What are the drills carry onboard your company vessels.
- 13.How do you rescue injured person from enclosed space.
- 14.what is the limit HC in enclosed space?
- 15.How do you train a fresh cadet?
- 16.your vessel ran aground & oil leaking to sea what is your action as C/E ?
- 17.After major fire in generator flat you have re-entered after flooding CO2 ,How are you going to start generator.?
- 18.your vessel int. shaft coupling bolts slack, what is your action?
- 19.How the M/E axial vibration absorbing?
- 20.What are the services you request from shipyard for dry docking?
- 21.Incase phase seq. indicator out of order how are you check correct phase seq.?
- 22.What are the bottom inspections at dry dock?
- 23.What are the inspections of sea chest from bottom?
- 24.Incase dent in bilge keel what do you do?
- 25.How do you inspect s/tube bearing of C.P.P. propeller shaft?
- 26.How do you remove muff coupling, incase difficulties in dismantling what do you do?
- 27.What are the differences between old common rail(Doxford) & new common rail(RT flex)?
- 28.What is specific F.O. consumption & specific cyl. Oil consumption .How calculate?
- 29.What is poly phase motor?
- 30.What is the use of capacitors in starters?
- 31.How elec. Propulsion braking?
- 32.Torque/Speed curve for hydraulic pump motor?
- 33.How do you test over current trip?
- 34.'V' Type engine piston removal.
- 35.How do you carryout Load line survey?
- 36.How do you test water tight integrity of Hatch cover?
- 37.Sketch hatch cover sealing arrangement.

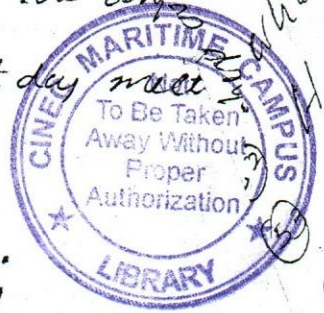


- New Aditessa  
1/45 minutes Mrs. Herrath  
Mr. Chandimal
- ① what is your company
  - ② what are the types of ships it operates
  - ③ what types of ship you have sailed
  - ④ what are the your company O/E duties
  - ⑤ How you implement ISM onboard
  - ⑥ what are functional requirements
  - ⑦ How you carry out internal audit
  - ⑧ what items you check on bridge
  - ⑨ what are the master's documents
  - ⑩ what is NTM (Notice's to Mariners)
  - ⑪ How you check whether water treatment is effective in boiler during open up for survey.
  - ⑫ what is galvanic corrosion
  - ⑬ what are the dissimilar material found in boiler
  - ⑭ How galvanic corrosion take place in boiler.
  - ⑮ what is the boiler tube material. (Tube plate)
  - ⑯ How common rail pressure control in flex engine
  - ⑰ Low load operation of flex engine
  - ⑱ what are the redundancies
  - ⑲ MLC 2006 (All requirements)
  - ⑳ what items you check on decic during internal audit
  - ㉑ window periods of surveys
  - ㉒ How you prepare for dry dock
  - ㉓ How you prepare job specifications?
  - ㉔ what is the bar code number of dry dock jobs.
  - ㉕ How what you do when you find a nonconformity during internal audit
  - ㉖ How you overhaul bow thruster motor at dry dock



57. What are the switch board protection.
58. What are the generator protection.
59. Draw any of protection (Reverse power)
60. ~~What~~ your action on voltage second engineer.
61. What is dead front.
62. What is the ~~ATM~~ NVM (Notice to Mariner)
63. How you do audit deck department.
64. What you check on bridge.
65. How you order bunker from Colombo to China.
66. What is unpumpable.
67. Bunker ~~is~~ received less amount what your action.
68. How you prevent.
69. Bunker overflow what your action and how your reporting.
70. How you comes to know ISM is implemented or not on your vessel.
71. How you carried out ISM review as chief engineer and what your area.
72. What is the different between ME engine and RT flex engine.
73. Why they introduce these engine.
74. Draw the sequence of slow steaming and note down the time period.
75. What included in NOx technical file.
76. How evaluate NOx in engine.
77. How you carry out scavenge inspection.
78. What instruction to given second engineer for scavenge inspection.
79. How you prepare report for Superintendent.
80. What check on piston rings.
81. How you evaluate cylinder liners.
81. What is flashing on deck ~~engine~~ machinery.
81. How you carried out rocking test for cargo crane.
82. How many readings on rocking test.
83. ~~Why Reason~~ for carry out rocking test.
84. Automatic boiler burner control.
85. What different b/w fuel vlv and <sup>solenoid operated</sup> speed check vlv.  
<sub>solenoid operated</sub>
86. How many chapters in SOLAS and. what is chapter ~~XII~~, ~~IX~~ and ~~V~~

- 26) How you carry out a tank repair in dry dock by your fittles.
- 27) How you plan this job. (dry dock first day & daily meeting)
- 28) How you carry out fire watch &
- 29) How you order fuel after dry dock. (Hull roughness reduce consumption less)
- 30) What is dead fuel how you calculate.
- 1) What is instrumentally safety equipment
- 2) For what equipment is this supply (low power instrumentations, communication, sensors)
- 3) What are the cylinder related functions (RT flex)
- 4) What you do if fcm 20 fails.
- 5) What type of plate you use for hull repair in dry dock
- 6) What include in material certificate.
- 7) Draw & explain electro magnetic overload relay. How this trip behave during start up period.
- 8) What is the V/I of instrumentally safety equipments.
- 9) What is insulated earth system & un-insulated earth system
- 10) How steering gear is supplied, with
- 11) How tuncer is supplied with.
- 12) What are the emergency fire PIP regulations
- 13) What are type of water tight doors type A, B, C.
- 14) What are the water tight door regulations.
- 15) What are the critical equipments
- 16) Is boiler a critical equipment
- 17) How often you test fire alarm according to the SOLAS.





Dividing  
meters

what is deficiency (ISM)

How you report deficiency } ISM

Management review interval.

What is accumulation of pressure test

How you do that

Electromagnetic over load trip for motor & Panel board are both same any difference

Gradual increase of  $cl^{-1}$  in boiler

Sudden increase of  $cl^{-1}$  in boiler

What is the boiler shell material

Tube material tube plate material

What are the critical items on board

critical equipment

critical spares?

# ELECTRICAL

- 71) What is power factor & why it is 0.8
- 72) Draw & Explain static excitation system.
- 73) What are the switch board protections.
- 74) How does a motor protect with a fuse
- 75) What are the motor protections.
- 76) What are the earth leakage indicators.
- 77) Draw 3 lamps method & Explain
- 78) If anybody didn't check the 3 lamps E.F. System how do you get to know about phase earthing
- 79) How do you synchronize 2 generators
- 80) Why do you stop the synchronizer immediately once you synchronized
- 81) How do you increase the load to the generator.
- 82) You cannot increase the load to one generator what is the reason.
- 83) Black out happened when two generators are running due to problems with AVR on one generator. How do you get to know which generator got the problem (Black out already happened).

## AUTOMATION

- 84) What is cascade control, draw & Explain, Example.
- 85) What is the controller of slave controller
- 86) Why we use PID controller on slave controller

- 87) What kind of signal given through the slave controller to the correcting element (Air, hydraulic, electrical)
- 88) What is the construction of correcting element for these 3 signals.

### NAVEL ARC

- 89) What is free surface effect-
- 90) How to control the free surface effect-
- 91) What is Angle of LOL
- 92) What is the ~~Angle~~ Action we take in Angle of LOL condition.

- How does tube light operates
- What is the use of starters.

### AUTOMATION

What is the construction of slave controller