

# ANIL BHAT SIR MUMBAI NOIDA

22/04/2021

external : anil bhat

internal : purna majhi

Electrical

- difference b/w full wave and half wave rectifier
- what is shaft earthing why it is used
- what is iccp why it is used hw it works
- what is earth fault how will you find out
- what is the diff bw squirrel cage and slip ring motors
- where do we use slip ring motors
- what is auto transformer
- why we cannot use dc transformer
- what are the things in motor name plate
- what does ip56 means (what is ingress number )
- alternator routiens

safety

- difference between water tight and weather tight doors and hw will you test them.
- dirrence between apprent slip and true slip
- what is pitch ratio,prismatic coefficient,block coefficient,sheer strake , and tomble home.
- what is semi portable extinguisher.
- what type of foam inside semiportable ext

- what type of fixed FF system for deck and er
- how does boiler uptake fire occurred
- regulation and recent amendment for garbage
- what is mast riser how does it operate and wt is the hieght in ur ship and why it is at the top
- interlocks and safety in IG system
- name any five certificate regarding cargo and cargo handling certificate tanker should carry.
- what is non conformity and major conformity.

22/04/21 Mumbai

Internal- Purna Majhi

External- Anil Bhatt

Motor and Mep

Type of ship

Engine type

Difference between me and mc

Fiva valve working

Overload limit on your engine

When does overload happen?

How many seconds before it trips?

What is TEV?

What is superheat?

Why equalising line is used?

**What is back pressure valve?**

**What is nitriding?**

**Where are such metals used?**

**What is normalising?**

**What is annealing?**

**What is 2G, 3G and 4G welding?**

**Other kinds of welding**

**Difference between Tig welding and Mig welding**

**Bilge suction valve is damaged, no spares, lapping not possible, what to do?**

**Centrifugal pump casing is cracked, what to do?**

**Bilge pump not taking suction, what to do?**

**How to remove a broken stud, which is stuck inside?**

**DG Crankcase inspection, what all checks? (He wanted to hear hammer test)**

**Result- pass**

**Attempt 1: functions all**

**Surveyor- manjhi sir (didn't ask) and anil bhatt sir( very frndly)**

**Safety-**

**Static and dynamic stability**

**Why angle of contrafracture doesn't increase after that point**

**Code and convention**

**Solas marpol isps ism(with dates)(was happy with my dates 😊)**

**New ammendment in annex 4,5,6 and bwm**

**Displacement, deadweight, lightweight, rltm between displacement and lightweight.**

**Solas which chapter is 11-2, 9, what comes under this in details.**

**Unit of deadweight.**

**Why static stability curve explain**

**Gz and gn curves**

**How u calculate these?**

**Apparent and true slip?**

**Which fixed fire fighting system was present onboard?**

**How much was expansion ratio on your ship?**

**GRB ammendment?**

**Air pollution ammendment?**

**Sewage ammendment?**

**... few more questions can't remember all.**

**Electrical-**

**Type of fuse?**

**Why we need capacitors? Is it present in 1phase and 3phase?**

**Types of transformers(all)**

**How will u do test of preferential trip and reverse power.**

**Types of starters where you had soft starters onboard?**

**What is earthing system why required,**

**How u find earth fault?**

**What are the indications of earth fault?**

**Why can't we use DC for transformers?**

**What is 3phase3wire and 3phase 4wire system? How do we achieve this , where u connect this connection, why required? Why star connection why not delta? Difference between these two.**

**Some questions were related to motors can't remember now.**

**Motor and mep-**

**What type of engine(Mitsubishi and Yanmar)**

**Ok explain me electronic governor?**

**Explain how will u take thrust bearing clearance (i screwed up here, got confuse )**

**What is foaming and priming**

**What is steam trap?**

**Why required?**

**What is superheated steam , why required which is better superheat steam or other?**

**Phosphate test explain procedure**

**Why foaming happens why priming happens ( detailed reasons)**

**Your bilge pump not taking suction and bilges are not getting empty what could be the reasons ( all the reasons+how to test)**

**Filling of oil in refer, what if the refer leaks while filling this?( I said we can condense it and then we can fill, he was satisfied)**

**OMD alarm came on your watch tell me detailed step by step and why doing these steps?(remember inform bridge first and then inform CE)**

**Is it a autoshut down (omd alarm), means will it shutdown the engine or u hv to do manually?**

**Windlass safety and maintenance.**

**Air bottle saftey**

Resonance, frequency, vibration?

Your engine is running on overload what alarm u will get? Till what time u can run the engine in this condition?

While making the engine we do overload test why we do that?

Difference between vent of air compressor and fridge compressor?

Where do u have vibration dampers? Working and requirements?

What is superheat?

What is de-tuner?

How will you make valve seat in good condition again if the seat is (he said a specific word can't remember) but i said we can't use valve cutter and then lap it, he said good.

Boiler water test?

Explain sewage treatment plant? Why chlorine we have to add? What type you had on your vessel?

What is the pressure inside STP and how u maintain it?

Regulation regarding stp?

Effects of priming and foaming in boiler and how it affect other systems?

+... Few more 😂😂. Gave my best but fucked up in few questions very silly mistakes.. he said u were doing so good in starting what happened i said sir nervous hogya suddenly 😂 he started laughing.

Lastly manjhi sir said what do u think how was it, which attempt i said first, he said ok good👍. We'll give u 3&5

Got electrical and safety ❤️

Need to work on motor and mep again 😞

Thank u all of you for your support,. Thank u amit sir , sunil sir for the guidance. Thank u samant sir, onkar sir, bikram sir, and every faculty in HATC.



26/04/2021

Noida

subbarao

Anil batt

Solas chapter all

Chapt-12 detail

Sprinkler and hyper mist

Gz curve whole cross question

Frame from where v count

Garbage strake sheer stake

Fixed fire fighting in hold

Co2 temp and why

Steering gear safety

What is self starting failure alarm

Elec

Vdf

Auto transformer where in used

Copper lose iron lose.

**Zener diode were used zener potential**

**Got both**

**26/04/2021**

**Function 6**

**Internal: Manjhi**

**External: Anil Bhatt**

- 1. Boiler blowback, Boiler firing whole process, what happens inside and how you start, how you change load**
- 2. Meat room temp not coming. Reasons. What happens in case of moisture.**
- 3. How to change Fuel Pump timing.**
- 4. Liner removal and calibration. How liner is fixed, at what position.**
- 5. AE crankcase inspection**
- 6. Reamer and drill**
- 7. Propeller Drop, Rudder drop and clearances**
- 8. Types of rudder, hollow safeties and what type of coating inside and how to do coating**
- 9. Refer leak tests**
- 10. Halide torch and mixture inside!**

**COC attempt**

**Func 6 MEP**

**Int: Manjhi**

**Ext: Anil Bhatt**

1. OWS maintenance, 0 ppm and 15 ppm test, how to check if solenoid valve partially opening or fully opening
2. Rudder maintenance during drydock, jumping clearance and other clearances on rudder
3. Rudder type on my ship, hollow or solid, how to paint it from the inside
4. TEV malfunction, how to repair and overhaul
5. How to change V belt of AC compressor, why reefer compressor has V belt
6. What is least count in Vernier Calliper, how much was it onboard ship, how to measure it, what's its significance
7. How to know if Liner cracked, what indications, how will you know if its liner cracked or cylinder head cracked.

What is tell-tale hole, where located on engine, what's its purpose

8. Bearing nomenclature
9. Piston cannot be used, How will you know, what checks you'll do on it
10. How to order pipe from IMPA
11. How to replace a section of pipe in a pipeline

Got COC

26/04/2021

Anil bhatt is a 

And manjhi sir is too cool

Gz curve

Smoke detector in cargo hold working and

Fixed fire fighting co2 working

**Instrument measuring methane content and how in cargo hold**

**Why filter on instrument measuring methane gas**

**And why collar is given**

**Why hru not in forward**

**What will happen if ph value is higher inside bilge and how to rectify it for safety purpose**

**What is the need of trimming of iron ore why needed and for approx how much angle**

**Got coc** 

**26/04/2021**

**Electrical**

**Internal- Puran manjhi**

**External- anil bhat**

**Types of starter**

**Explain soft starter**

**How much time is taken from switching star to delta?**

**What will happen if it will not switch to delta**

**Iccp and mgps?**

**Shaft earthing?**

**How to check earth faults?**

**Coc** 

**26/04/21**

**2nd attempt**

**internal - Purna Majhi**

**external - Anil bhutt**

**#Mep**

**fatigue failure**

**why we change con rod bolts (cross ques)(wants to hear fatigue failure)**

**NDT tests**

**compressor and air bottle safeties**

**and more i forgot**

**if vegroom temp. has gone down below 0'C ...reasons**

**capacity control of AC how it works and cross questions**

**#electrical**

**types of transformer**

**CT how it works**

**steering gear motor safeties**

**navigation lamps alarms**

**why generator star connected**

**3 & 4 wire system**

**ESB & MSB safety (interlock how it works)**

**emg. gen. load test during sailing ( cross ques.)**

**undervoltage relay working and location**

**zener barrier**

#motor

type of engine

how cam shaft is connected

why i-section con rod

chain drive vs gear drive

advantages and disadvantages of gear drive, chain drive

and more i forgot

last decider by external only

if generator generating normal volatage but not able to take on load why??(didn't agree on any point?)

Got motor and mep . 

electrical repeat 

26/04/21

2nd attempt

internal - Purna Majhi

external - Anil bhutt

Motor

• thick shell & thin shell bearings. Advantage of both Where we use thick shell bearings and other one?

- What is special about X head bearing? What was pressure on your engine? How its different in sulzer
- Advantage of telescopic pipe? How its done in sulzer? Advantages?
- Follow up and non follow up in steering
- Liquid coagulant in boiler
- Corrosion and types? Fretting and pitting corrosion?
- Electric Governors ? Diff in ME and AE? Electronic governor
- Axial and longitudinal vibration? How they are taken care of?
- Detuner? Where is it on ME? How it works?

Elec

- Relay vs contractor
- Why dc used for excitation of alternator
- Brushless excitation? DC excitation
- Induction motor classify
- Where we use Wound rotor?
- If power fails when hanging piston in crane what happens? If in case it happens and fails safe happens, how will you bring the piston down
- Navigation lamp alarm?
- Battery room safeties. If blower not available how will you ventilate?

Got only Motor

05/05/2021

Ext: Anil bhat

Int: Subbarao

Safety:

**All Solas chapters,**

**Chapter 9? Explain chapter 9 in detailxx**

**Which fixed fire fighting system on cargo hold,**

**Regulation of CO2 room**

**Capacity of CO2 bottle, hydraulic testing duration, testing pressure.**

**Gunwale, ship construction many small definitions I don't remember.**

**Electrical:**

**Types of induction motor**

**Brushless alternator many cross questions**

**AVR**

**When single generator running no voltage generation at output reasons.**

**Rest questions forgot**

**MEP:**

**types of corrosion in boiler cross questions**

**What is pitting corrosion**

**What is Hydrogen corrosion**

**Type of boiler**

**Which type fwg**

**Reasons for High salinity alarm cross questions**

**How to find leakage in shell and tube type heat exchanger.**

**Difference between chain drive and gear drive**

**How to charge lube oil into refrigerator cross questions**

**Motor:**

**How cam rotates**

**Main engine trips**

**ME Reversing**

**Got ONLY MEP**

**DATE -6-04-2021**

**TIME -50 MIN**

**SUBBARAO**

**Safety**

**Mlc2006**

**(If you are not getting enough rest what will you do.)**

**Anti healing pump tank capacity**

**cross curv, static curve**

**Annex 6 new regulations**

**Provision to load dangerous cargo present in container ,**

**How to relese CO2 when fire in engine room(if your 2 nd engineer is missing )**

**Annex 3**

**Statutaroy stearing(don't know)**

**Shell expansion plan/Simpson rule**

Seemp and eedi(difference eedi eei)

Motor /mep

How much should be the referigerent in system

Refrigerent charging process ,

what happen if back pressure valve is faulty

How to take wear ring clearence, material in pump

Lantern ring function and material

Safeties on starting air line

Air gaurd seal(why given)

K,L,M clearence in T/C(what if not correct)

Oil in boiler what to do , types of trap working

If specific gravity of fuel increase, what should be the gravity disc size.

How to remove generator valve seat

How to take performance of A/E , why not powe card

How piolet valve work(purifier )

What are catfines

What is FQS how to change ,CCI,Vit, super vit

How rack works

Exhaust of one unit is high

Electrical

HRC fuse

**Earth fault (440)**

**Preferential trip**

**Synchroscop working and xx(resistance, inductor)**

**Battery room check., (Why hydrometer you can check voltage by voltmeter also)**

**Safety on high voltage system**

**CT/PT(name the instruments also)**

**Thyristor,SOft starter and VFD difference**

**Result - fn 3 repet, rest all given**

**Thank you 😊 saheem Khan for posting question regularly,keep up the good work.**

**Anil Bhatt may 5th**

**Which ship? Bulk**

**What is Hopper tank ( don't know)**

**What is apparent slip and real slip**

**What is pitch ratio**

**What is garbod strake**

**What kind of cargo**

**What is static stability**

**What is dynamic stability**

**What is gz how is it calculated**

**X axis pe kya y pe kya?**

**What is righting lever?**

**Types of detector**

**How smoke and heat work**

**How hypermist works**

**Amendment in annexure 6 started confusing with 5&4.**

**Which engine's**

**Rtflex and me difference**

**Alpha lubrication**

**How is it done?**

**Turbo type**

**Which is good**

**What is VTG**

**Why constant pressure.**

**Material of the nozzle**

**How the fins arrangement.**

**What is earth fault**

**What is neutral**

**What earthing iso neutral**

**How is earth fault detected**

**Type of motor.**

**What is power factor**

**Many more.**

**What is iccp many XQ**

**ac or dc?**

**SHAFT EARTHIN? Why**

**Refrigerant unloader valve**

**How does it detect**

**Location how capacity control.**

**Oxyacetylene safeties**

**Cast iron Welding**

**Disadvantage of cast iron**

**Percentage of carbon in cast iron.**

**Fitter comes and say order this bolt how?**

**How to calculate the pitch.**

**Many more**

**At end asked internal asked what scavenge inspection is done. Then gave function 4**

**05/05/2021**

**What type of ship you sail**

**1.explain Class**

**3.Aperent slip**

**4.Real slip**

**5. Bilge suction vlv regulation**

**6. Difference between Weather tight door Water tight door how to operate from remote**

**7. Sea line safety**

**Type of steering gear**

**05/05/2021**

**Ext: Anil bhat**

**Int: Subbarao**

**Safety:**

**All Solas chapters,**

**Chapter 9? Explain chapter 9 in detailxx**

**Which fixed fire fighting system on cargo hold,**

**Regulation of CO2 room**

**Capacity of CO2 bottle, hydraulic testing duration, testing pressure.**

**Gunwale, ship construction many small definitions I don't remember.**

**Electrical:**

**Types of induction motor**

**Brushless alternator many cross questions**

**AVR**

**When single generator running no voltage generation at output reasons.**

**Rest questions forgot**

**MEP:**

**types of corrosion in boiler cross questions**

**What is pitting corrosion**

**What is Hydrogen corrosion**

**Type of boiler**

**Which type fwg**

**Reasons for High salinity alarm cross questions**

**How to find leakage in shell and tube type heat exchanger.**

**Difference between chain drive and gear drive**

**How to charge lube oil into refrigerator cross questions**

**Motor:**

**How cam rotates**

**Main engine trips**

**ME Reversing**

**Got ONLY MEP**

**1st at**

**Int : meena sir**

**Exp : anil sir**

**Safety**

**Type of ship**

**Experience?**

**Company name**

**1.Shell ex plan**

**2.Action on sca fir how will you Extinguished**

**3.intact stability ( i confused )**

**Some more question**

**Mic had some problem so he was irritated**

**Elec**

**What is air gap**

**. Aux gove working.**

**Mic problem so shote on me.**

**So, elec cancel directly fail.**

**Mep and motor**

**\* How many ship u sailed**

**# tappet clearance**

**\* How u will check air in refrigeration system**

**How u will remove**

**# aux engine**

**How gov works**

**How will u take out Maine bearing**

**Diff between inlet and ex valave.**

**Water ingress in sump - how did you come to know**

**(He want to know how u check and L.o test)**

**#comp**

**If busting disc bust what will be your actions as duty Engineer.**

**Me**

**Sca inspection**

**In case of CC explosion what is safety provide for that ( i said cc relief door)**

**#If sca fire causes**

**#If it will happen is that chance to crank case explosion ( i said yes)**

**What will you check during o/h of reciprocate pump**

**Internal gaan bhi maar raha tha orr mazee lee ke bola**

**Safety repeat kartaa huu tooo electrical bhi repeat kar detaa huu....😞**

**# Thank you for support guysss...**

**Keep sharing your knowledge in group 😊**

**28/06/2021**

**Mumbai**

**Ext: Anil bhat**

**Int: Subbarao**

**20 Mins**

**MEP :**

**What is pitting corrosion**

**Which type fwg on ship n hw to check salinity ( 0 ppm n 15 ppm)**

**Went questioning deep into welding defects**

**Asking about some lubrication used in centrifugal pump...**

**RAC safeties**

**Type of pump used in Bilge system n why**

**Motor:**

**Main engine trips.**

**Liner crack how to know.**

**Use of Indicator Cocks n then how many diagrams u will get n use of it.. ( inshrt indicator diagrams )**

**Fuel Injector types**

**Turbocharger types n wht type used on ME n AE**

**Got Motor**

**Repeat MEP**

**Anil bhatt bhai maast banda h👍**

**Bt questions MEP mein thoda tricky n tough pucha..**

**18/06/2021**

**Mumbai**

**Internal : Subbarao**

**External : Anil Bhatt**

**Boiler misfire reason ?**

**Type of boiler feedwater pump.**

**Centrifugal pump ... Can it be started with discharge v/v shut & reason for low discharge rate**

**.**

**Functions of accumulator in hydraulic line .**

**Main bearing clearance .Methods & name of feeler gauge used to measure main bearing clearance .**

**Fuel leak off alarm & testing.**

**How to relief excessive combustion pressure .**

**Reason for having space heaters in refer compressors( pour point & moisture/refrigerant wala reason bola , god knows usko kya chahiye tha)**

**Intake & exhaust valve how will you distinguish .**

**AE cyl. head pressure testing.**

**ME & AE lubrication .**

**Got 4b repeat 6**

**Saheem khan:**

**28/06/201**

**Subbarao**

**Anil bhatt**

**MOTOR**

**\*What type of ship**

**\* which type LNG tank u had**

**\*Chain elongation explain**

**\*Fuel leak off alarm**

**\*TC and KE changed to pressure energy**

**\*Main sump is mixed with water How you get to know**

**\*Lub oil tests**

**\*TBN values**

**\*Lub oil property**

**MEP**

**\*Why scale formation in FWG**

**\*Explain about gear pump how it works**

**\*what is NPSH**

**\*why heater in crankcase of refer**

**\*why we have flywheel**

**\*which one big in 4S 2S**

**Got both**

**02/07/2021**

**Mumbai**

**Meena sir**

**anil bhat sir**

**Motor**

**Thin and thick metal bearing**

**nomenclature of bearing**

**aux eng. nomenclature**

**Piston skirt and crown material**

**why crown is separate**

**Material crown and piston**

**Hot cold corrosion**

**Cpr piston ring**

**Decider**

**Follow up Non follow up**

**Pass**

**02/07/2021**

**Mumbai**

**Internal : Meena**

**External : Anil bhat**

**Motor, 4b**

**1)Difference between RTFLEX and ME.**

**2) common rail**

**3)FIVA valve**

**4)ELFI valve**

**5)how cam shaft in rotated**

6) Difference between ME and MC engine

7) types of ME engine

8) difference between ME-C and ME-B

9)alpha lubricator

10) difference between chain drive and gear drive (advantages and disadvantages)

11)cross head lubrication in Sulzer and MAN

12) Types of turbocharger

13) why constant type

14)what is VTA/VTG and working of it.

Result: COC 🍷

Anil bhatt sir ext.

Gauri lal meena sir int.

Safety func.3-

Type of ship

E/r crane safeties

Scavenge fire/inspection

Co2 ffs & Hypermist

Margine plate,margine line

Bulwark

Freeboard

Coffin plate

Gz curve

How to find gm in gz

angle of contrafracture

What happens in end of gz curve

Which ship is using normally tender or stiff

Water tight and weather tight door

Collision b/h

Shell expansion plan in brief, I numbering starting from fwd or aft in SEP.

Garboard strake and uses

Block coefficient

Metacentric height

Angle of loll

2-3 more but i forgot

Electrical func. 5-

What is diode & cross que (zener, and types too)

Generator measures in, connection used in genny (star or delta)

Transformer measures in,

transf. Type in your ship, ac supply given of dc

Iron loss (eddy and hysteresis both)

Ac motor ip rating and how much it has in your ship

3 phase 3 wire and 3 phase 4 wire difference

Squirrel cage and slip ring motor difference

Brushless alternator

Piezoelectric effect

Protection of e/r crane

3 lamp

Difference between auto transformer and soft starter

Star delta starter why star is using in starting, why time delay unit, if fails what you do?

Reverse power trip

2-3 que he asked which is having term going from my head top

Cleared safety ❤️

Electrical remain 😞

दंडवत प्रणाम 🙏

Sunil (SP)sir Raj sir @onkarHATC sir @gourav sir Ashish sir hatc and to all faculty and family of hatc ❤️

Thank you guys for responding properly. 😊

5/jul/2021

Mumbai

Anil bhat, meena

1- types of turbocharging

2- CPR

3- In linear we have One Ring and purpose of it

4- M/E crankcase inspection

5- Boiler feed pump type, what will happen if we put pump in parallel & series

6- Refrigeration compressor short cycling

7- what are nitriding, Hardening, Normalizing

8- Starting of boiler if Auto system is fail

9- If bilge valve is worn out and u cannot do the lapping, what will you do.

10-Accumulation of pressure in boiler why 15min for fire tube boiler

11-Air cooler choked how you will get ti know

12- difference between lube oil properties of Cyclinder oil n crankcase oil.

Motor pass,

MEP repeat.

05 july 2021

mumbai

Meena

anil bhat

Motor:

Overloading of engine.

Ionization smoke detector.

Fuel leak off alarm.

Why leak off alarm

Exhaust spring is there not how can run the engine??

Why safety air??

Cyl lube oil and GE lo difference.

Aur bhi the yaad nai

Exhaust valve spring air \*\*\*

Mumbai

05 july

Anil bhat..

**Meena**

**1.steam trap**

**2.water hammering**

**3.Bearing 6215 meaning**

**4. How to order bolt**

**5. How to order cutting wheel**

**6. How to remove broken stud**

**7. How to renew exhaust guide**

**Mumbai**

**5/7/21**

**Meena**

**Anil bhatt**

**Motor mep**

**4 stroke piston lubrication (i explained him all but he was not satisfied)**

**1 unit peak pr low reasons and what to do**

**How to adjust fuel pump timing in 4 stroke.. ( he wanted exact procedure for adjusting timing bolt)**

**In case of cpp control failure what to do (local control to be used)**

**Thrust bearing removal procedure**

**Difference in suction and discharge valve of main air compressor**

**Unloader function**

**Refer system what alarms and how to test those alarms**

**Refer to properties**

**How main engine connected to propeller shaft. (reduction gear)**

**What is reduction ratio?**

**Camshaft and crankshaft speed ratio in 4 stroke.. Why is it so**

**Crankshaft deflection why taken.. He wanted more reasons**

**What is fatigue failure**

**Thin shell and thick shell advantage and disadvantage of both.. Materials used**

**Starting air valve**

**Rest forgot.. He asked too many questions**

**Electrical**

**Alternator winding star or delta.. Why so**

**Slip ring induction motor.. Construction.. Why and where used**

**Squirrel cage motor**

**3 ph 3 wire and 3 ph 4 wire system**

**Insulation resistance test**

**Rest forg**

**Mumbai MMD**

**Int: Gauri Lal Meena**

**Ext: Anil Bhatt**

**5th July 2021**

**2nd Attempt**

**Safety:**

**Type of Ship**

**How LPG Carrier is different from Crude Oil Tanker?**

**Explain Independent Tank**

**Structure of Type A (Layers), B, C and Membrane Tank.**

**Which Hazardous category your ship?**

**Explain Difference betn 1G and 2G.**

**Explain seal in shafting of cargo pump.. (I had fully submerged p/p)**

**Explain meaning of fully submerged pump.**

**Safeties against cargo leakage in Compressor Room.**

**Firefighting arrangement system on Deck.**

**DCP**

**Water Spray System.**

**Person falling overboard. Actions**

**Person falling unconscious. Actions**

**Solid Floors**

**MEOL:**

**Type of Engine. ME and AE. Nomenclature.**

**Lube oil test onboard**

**Different Indicator Cards**

**Derive power without using cards.**

**Turbo Surging**

**Turbo Matching**

**How do you vary FO Quantify in Aux Engine?**

## **Unloading Mechanism in Refer System**

**Electrical:**

**ER Crane Safeties**

**Load hanging over crane, how will you lower the load when power cutoff?**

**Single Phasing**

**How single phasing prevented?**

**Single Phasing Protection Relay**

**Motor Protection Device**

**Explain VFD**

**Explain Rectifier Setup**

**Where VFD used on Ship?**

**Bow Thruster Starter Methods**

**Control of speed of AC and DC Motors**

**Why exactly DC used in excitation.**

**Permanent Magnets in Rotor**

**Got all three.**

**Done with CoC.**

**Best of luck everyone.**



**MMD Mumbai**

**05th July 2021**

**Meena and Anil Bhatt**

### **Fn3 - Safety**

- 1. Watertight and weather tight door. Regulation.**
- 2. Pitch ratio**
- 3. Apparent slip and true slip**
- 4. Block coefficient**
- 5. prismatic coefficient**
- 6. Solid floor**
- 7. Bracket floor**
- 8. ODS**
- 9. Nox technical file what all to be recorded.**
- 10. How to make sure u r nox compliant?**
- 11. Annex 1**
- 12. Why 15 ppm?**
- 14. Explain OWS regulation in detail**
- 15. weekly ORB entries.**
- 16. Lifeboats and rescue boat regulations.**
- 17. Lifeboat specs for gas carrier.**
- 18. Type of Ship sailed? Specs? cargo carried ?**
- 19. Tank structure and how is it different from others?**
- 20. Tank material and speciality about this material?**
- 21. Types of rudder and what's on ur ship? Speciality about semi balanced rudder?**
- 22. Structure of Rudder? Why hollow?**
- 23. How the inside of rudder is painted?**

24. IGC code n IGF code.?
25. Differece btween code n convention?
26. Statutory and mandatory certificate?
27. Free surface effect? Effect on G & M.
28. Smoke Detector? Regulation and working.
29. Enclosed space entry procedure and why time limit on thr permits?
30. PFE yearly maintenance. For CO2 and FoAm.

Many more can't remember

**Fn 4b - Motor**

1. Main engine and aux engine specs and nomenclature.
2. Bearing nomenclature
3. Piston cooling flow diagram
4. Chain drive and gear drive, advantage and disadvantage.
5. How torsional and axial vibrations are damped in main engine?
6. Thrust bearing working? Why insidr engine?
8. Pistion cooling alarm! How will u chek truness of alarm? Action to be taken?
9. Air compressor unlaoder? 2 main reasons?
10. Refer compressor LO properties. ?
11. Lube oil test onboard? All tests
12. Why viscosity is imp? How it was maintained onboard?
13. BOILER mountains all. .
14. Line up centrifugal pumps for max discharge and Max pressure.
- 15 how to tackle short cycling of pumps in parallel mode?
- 16.Main engine overload? What resons and actions?

**17. Safematic steering system . Entire process.**

**More questions ..can't remember**

**Fn 5- EECOL**

**1. MSB safeties**

**2. Maintenance on ACB**

**3. Different types of circuit braker , explain constructional details**

**4. Diffrence btween realy and ckt.**

**5. Shore connection box indications.**

**6. In drydock , If PSI not working how will u know phase angle js same?**

**8.Starter Routines ? How to clean contacts?**

**9. Alternator air gap? Why is maintained?**

**10.Steering gear alarms n trips.**

**Many more.**

**Total time 1hr 50 mins**

**Result: Cleared all 3 : COC 😊**

**Goodluck guys.. 🙌**

**Mumbai MMD**

**Date- 07/07/2021**

**Internal- Subbarao**

**External- Anil Bhat**

First attempt

Function 3 - COSCOPOOL

Fixed fire fighting system onboard (Co2)

Type of ship ( container)

Fire fighting system in cargo hold everything

Shell expansion plan

Fixed Co2 system 5 yearly check and 10yearly check

Water tight and weather tight doors and how to do pressure test and operated from where

Solid floors

Bracket floors

Permeability

SCBA how to fill bottle

EEBD

1 more I didn't remember

Function 5 - EECEOL

Specifications of generator

Generator is not starting

Where to connect DC supply for residual magnetism

Transformer losses

High voltage system

Breaker used in high voltage system and why vcb

Generator is star connection or delta

difference between neutral and ground

Star delta starter

Auto transformer and where used on ship

Decider question by Subbarao - Want to parallel the incoming generator all parameters are same but still the breaker is not closing why

Overspeed of generator what to do

Got Function 3

Repeat Function 5

Thank you all my friends for helping me means a lot 

07/07/2021

Mumbai

Ext.: Anil Bhatt

Int.: Subbarao

Safety

1) which ship did u sail?

2) Gt, Nt dwt, Light weight?

3) types of rudder( which rudder on ur ship)?

- 4) difference between sprinkler and hypermist?
- 5) testing of hypermist and sprinkler?
- 6) what is convention and code?
- 7) Name some convention and code?
- 8) What is fse?
- 9) life boat releasing method?
- 10) Launching of free fall?

#### Motor

- 1)Which engine??
- 2)Mc and ME difference??
- 3)Hot and cold corosion?
- 4)Piston cooling methods?
- 5)Which on ur ship??
- 6) advantages of oil??
- 7) disadvantages of water type cooling??
- 8) why water cooling is better than oil??
- 9) what is cloverleafing?
- 10) boiler safety?
- 11) gauge glass safety?
- 12) why no ball is present on steam side??

#### Electrical

- 1) what is VFD??
- 2) working of VFD??
- 3) If 2 gen. Are paralleled but share different load reason??
- 4) synchronising methods?
- 5) how to synchronise with voltmeter?
- 6) shore connection box items??
- 7) what all checks are carried out while connecting shore connection??
- 8) how is shore connection connected to ship??
- 9) how to check phase sequence is if phase sequence tester is spoilt
- 10) types of fuse??
- 11) types of transformer??
- 12) what is pt? Working

Mep

- 1) maintenance of rudder??
- 2) how to pressure test the rudder??
- 3) do u know shell n tube type heat exchanger?? How to find leak in it??

Today had orals all 4 cleared 3 thank you for ur support.... And help providing info..... In the grp...

09/07/2021

Mumbai

Funct5

Anil bhatt sir

Meena sir

Types of transformer

types of starters

Ac transformer and Dc transformer

what is dead front panel

Checks in battery room

preferential trip

Reverse power trip

what is dastpot and where it is used

got it

09/07/2021

Mep

Anil bhatt

GL Meena

1.what overhaul you did

Purifier - What checks, type of bearing, nomenclature of bearing, how many bearings

2.Water in gear case of purifier. Fault finding and measures

3. Globe valve and gate valve overhaul

4. What is valve seat cutter

5. If seat damaged of globe valve what you do

6. Bulkhead crack repair

7. Omd alarm. Indication , action
8. Centrifugal pump overhaul procedure and checks
9. Name boiler water test
10. Phosphate taste. why

Pass . COC 

09/07/2021

NOIDA

Meena

Anil bhatt

MEP

Charging of oil in reefer compressor

Thrust block clearance

Nitriding, annealing,hardening

Bearing nomenclature what is 6205 bearing

Types of movements of ship on sea

Safety

Type of ship( mine was reefer)

Fire in container how u will know

Fixed fire fighting system for container on deck

Flooding in engine room

Emergency generator regulations

Discharge of bilges criteria

Got mep

Safety repeat

Mumbai

9/07/2021

Ext- Anil bhat

Int- Gauri Lal Meena

Motor, Mep

Show your room

1. Indicator diagrams, how to take and significance.
2. How to calculate power card, formula.
3. Lube oil properties.
4. Difference between ME and AE LO property
5. How to change ME exhaust guide.
6. How to take liner calibration.
7. What is major axis and minor axis.
8. How will you get to know that your internal micrometer is placed properly inside the liner n giving you correct reading.
9. How will you fabricate a pipe with holes in it and changing diameter. It should be exact same.
10. Peak pressure of unit 5 is not maximum. Reasons?
11. Type of compressor.
12. If relief v/v lifting of 1st stage and 2nd stage. Reasons?

13. Safety of compressor. How to check.

14. Refrigerant compressor LO property.

15. If tev is malfunctioning and no spare is there and there is this long voyage, what will you do.

16. Safeties on refrigeration system and how to check.

Got mep

ACCEPTED ANSWERS OF ABOVE QUESTIONS

4. TBN

8. I said I will move the inner micrometer in the liner and where it will show this largest diameter it will be the correct value.

At this he nodded n external said yes say this na

9. I said I will make this template with the wire but he said I want exactly the same one.

After this I said don't know sir then.

13. Lo low pressure, high discharge temperature of air

To check pressure setting lowered and temperature sensor dip in hot water

15. No idea

16. All the trips, for LP close compressor suction v/v and HP close condenser inlet v/v.

functon 3

09/07/2021

anil bhat meena

type of ship sailed

1.water tight door regulation

2 scaba testing pressure

working pressure

how will u charge onboard

3 eebd time for evacuation

4 prismatic coefficients

5 real and apparent slip

6 special area regulation for bilge

7 engine room flooded what ur action

8 free surface effect how u will reduce

9 block coefficient

02/08/2021

MUMBAI

MEENA SIR

ANIL BHAT SIR

SAFETY

lopp

Sopep

Loadline certificate

International tonnage certificate

Fire fighting booklet

Cargo ship safety certificate

Cargo ship safety equipment certificate

Doc

Smc

**02/08/2021**

**MUMBAI**

**INT- MEENA SIR**

**EXT- ANIL BHATT SIR**

**SAFETY**

- 1. Which type of ship you sailed on?**
- 2. Type of engine DFDE or not**
- 3. IGC code and IGF code**
- 4. Tell me about IGC code**
- 5. Margin line and its importance and plimsol line relation**
- 6. ISM code and ISPS code in detail**
- 7. Buttock Line, Gunwale, Solid Floor and many more terms**
- 8. Type of fixed fire fighting system on machinery space and details**
- 9. PFE which are banned onboard**
- 10. Checks and maintenance on foam PFE**
- 11. What is semiportable type extinguisher**
- 12. Hypermist system in detail and how to test it**
- 13. How do detectors work**

**ELECTRICAL**

- 1. Difference between commutators and slip rings and uses**
- 2. Why split rings used in DC**
- 3. Types of motor**
- 4. Difference between Squirrel Cage motor and Wound rotor**
- 5. Where are the motors used**

6. Brushless excitation explain
7. How is AC converted into DC
8. Types of rectifier and difference between them

And a few more

Meena Sir Decider question

1. What will you do if you find engine room flooding in your watch
2. What are the actions In case you see a person fall overboard.

02/08/2021

Internal: GL Meena

External: Anil Bhatt

Function 4 Motor

Type of ship

Type of engine

How piston is cooled on your ship?

Why oil? Advantages of oil and water cooled?

Different types of corrosion? Caustic embrittlement?

What is hot corrosion and cold corrosion?

Type of purifier? How alcap functioning?

What is pairing disc?

What is turbo charger surging? Why it happens?

What is lybernith seal? Material?

What type of turbocharger u have?

What is K clearance? Waht is value?

How turbine blades are mounted on rotor? Lacing wire?

**What is MEP what is MIP? how it is found?**

**What are different cards? Explain light spring card, draw card?**

**How faulty fuel rack is shown in draw card?**

**How u will find late injection from draw card?**

**Function 6 MEP**

**what type of big valve you had?**

**If seat is badly damage how will you repair it?**

**What is 1g, 2g, 3g and 4g welding?**

**Waht is tig welding? What is mig welding?**

**What is difference between drill and reamer?**

**Wher you use reamer and wher you use drill?**

**If you Stern tube is leaking what action u will take?**

**What are different rudder clearances?**

**What type of steering?**

**How you mearure rudder drop in rotary vane type steering gear?**

**Got Motor**

**Mep repeat**

**02/08/2021**

**Internal: GL meena**

**External: Anil Bhatt** 🤔 🤔 🤔

**Duration: >1 hr**

**Function 4 and 6**

**Type of Ship**

**Type of engine**

**Type of governor. Which type of governor in ME and AE. Working of both. How it maintains constant speed?( I had no idea)**

**Why no droop in ME? (Not accepting anything)**

**Thrust block and Lots of cross question**

**Axial and radial vibration and lots of cross question**

**Starting interlocks. He Wants working of interlocks**

**Detuners. Purpose, working. Where is it fitted exactly?**

**Overloading of engine. Wants exact working of an overload trip**

**Overspeeding of engine. Working of overspeed trip**

**Windlass brake testing(iski g me ghus gaya). How does the testing equipment look like? How it functions?**

**A pipe having 10 bends 🤪 with varying diameter has hole. How to fabricate same pipe?**

**Leakage in shell and tube type heat exchanger and lots of cross question.**

**Many more questions. I'll post when I'll remember**

**Engine type**

**Advantages of chain drive and gear drive**

**Pr testing of piston,cylinder head**

**Air start valve leaking how to know,what to do during manuvering**

**Automatic start valve**

**Material of bed plate and how it is constructed,tie rods,chokes material**

**Mep**

**STP maintenance,pr. And type of compressor in STP**

**How to order bolt,grinding wheel(mention rpm)**

**How is radiography NDT done**

**How is magnetic particle NDT done**

**Leaking shell tube type HE how to identify**

**02/08/2021**

**Internal: GL Meena sir**

**External : Anil Bhatt sir**

**Safety**

**Enclosed space**

**Gunwale, Bulwark, solid floors, Girders**

**STP New ammendment**

**Bulbous bow advantages disadvantages**

**Motor&MEP**

**Safeties in air starting system**

**Vane type steering gear system & its rudder drop calculation**

**Refrigeration unloader working**

**Veg room temp becoming negative,reasons?**

**Boiler Accumulation test? Why to do?**

**Purifier seal ring damaging continuesly even after replacing with new, Reasons?**

**Fire fighting systems onboard? Weekly, monthly, yearly maintenance portable fire extinguisher?**

**CO2 portable extinguisher maintenance, checks?**

**Max n Min weight of portable fire extinguisher?**

**Checks when ship gets grounded?**

**Electrical :**

**Single phasing of motor?**

**When single phase in ckt why 3 phase motor cannot start?**

**Earth fault**

**Alarms & trips in Fridge**

**How single phase motor starts? Capacitor role?**

**How to revive motor immersed in water?**

**Anil bhatt**

**Subbarao**

**5/8/21**

**Safety :**

**1) What is a convention and what is a code. Difference between both.**

**2) prismatic coefficient**

**3) block coefficient**

**4) which ship sailed. I told vlcc. Asked firefighting systems onboard. Then asked about hypermist system. How it works. Sensors for getting system activated. How to test sensors**

**marpol annex 5 and latest amendment**

**Rest forgot**

**Electrical:**

**1)What are the safeties on a generator**

**2)What is high voltage**

**3)advantages of high voltage system**

**4)what is single phasing**

**5)why single phase motor is not self starting**

**6)what is copper loss**

**7)what is iron loss**

Rest forgot

2 din padh ke electrical nikal gayi. Safety toh start bhi nhi kr paya tha. Thanks saheem bro.  
Aapke questions se bhott help hoti h 

05/08/2021

SUBBARO

ANIL BHAT

SAFETY

\*Gunwale

\*Garboard strake

\*Weathertight /watertight (Upto which head it doesn't allow water to pass

Bro usne mere se poocha watertight door mei kis head tak water ko pass nahi hone deta) i  
don't know

\*Solid floor

\*CO2 bottle pr.

\*Permeability

\*Static and dynamic stability

\*Types of Extinguisher

\*which are banned

\*Which checks done weekly, monthly, quarterly

\*Checks done on cap of extinguisher

ELECTRICAL

\*Types of Transformer

\*Safeties on crane E/R

\*If piston hanging can we lower the piston after power cut out.

\*Zener Diode

**\*half wave , full wave rectifier**

**\*Types of induction motor**

**\*Advantage of slip ring Motor**

**\*Diff. B/W Relay and contactor**

**Got electrical**

**06/08/2021**

**Meena**

**Anil bhatt**

**Safety**

**-fixed fire fighting system in cargo hold**

**-regulations for same**

**- how you make sure 85percent is released in first 2min**

**- apparent and real slip**

**- BWM**

**- isolating valve and when used**

**- new ammendments in annex 4,5**

**Which detector in cargo space**

**Working of smoke type**

**Types and working of smoke type**

**Type and working of heat type dectors**

**06/08/2021**

**Meena sir**

**Anil bhat**

**Safety**

**Light weight dead weight net weight**

**Inclining exp**

**Hyper mist**

**Sprinkler**

**Collision bulkhead**

**Heel**

**Dynamic and static test for lifeboat**

**06/07/2021**

**Internal: Meena sir**

**Ext: Anil Bhatt**

**Safety:**

**Definitions: deadwt, lightwt, gross tonnage, net tonnage, displacement**

**Co2 room safeties**

**Coz room height**

**Fixed fire fighting system**

**Heat sensor regulations and types**

**Navigation light alarms**

**Navigation light which side is red green**

**Lifeboat static dynamic load test**

**Coffin plate**

**Difference between girder and frames**

**Types of floors**

**Electrical:**

**No voltage output from generator**

**Voltage there but generator not coming on load**

**What is ACB how it doesnt let connect when load mismatch**

**Earth and insulated neutral system**

**Types of transformer**

**Working of synroscope**

**Working of dc transformer why it doesnt exist**

**Working on auto transformer**

**How is Emergency generator disconnected when power in MSB is restored**

**How to give residual charge to Generator if charge is absent**

**Relay vs contactor difference**

**06/07/2021**

**Internal- meena Sir**

**Ext- anil bhatt(Banda ultimate h bas ghumaoo mat)**

**Safety**

**1- lots of definitions from ship construction (basics)**

**2- fixed fire fighting system regulation (foam type regulation)**

**3- how many relief hole on fire extinguishers.**

**4- d1 or d2 which bwms was on ur ship? How u exchange ballast.**

**5- what is dynamic stability.**

**6- how to find gz**

**7- working of smoke detectors.and regulations alsooo**

**8- which detector in cargo space**

**9- marpol amendment10**

**10- water tight door testing**

**07/08/2021**

**Meena sir**

**Anil bhatt sir**

**Safety**

**Type of ship**

**What cargo it loaded**

**Cargo hold fire safety and which detector is used in cargo hold**

**Isolation valve in fire line**

**Location of isolation valve in ur ship.**

**Gz curve**

**Angle of heel**

**Dynamic and static stability**

**What changes when ship will go from fw to sea water**

**Margin plate**

**And some more I forget**

**Passed**

**Date-7/8/21**

**Noida**

**Internal- Meena**

**External- Anil bhatt**

**MOTOR/MEP**

**Engine specifications**

**mc-c advantage,**

compact design kya hai,  
gear drive chain drive advantage and disadvantage,  
how to remove air from refer,  
centrifugal pump overhauling checks,  
main bearing Clearance,  
thrust bearing clearance,  
bottom end bearing clearance,  
pistons ring clearance,  
boiler manual firing

09/08/2021

Internal meena

Ext ANIL BHAT

Safety

Torsion box

Dead wt light wt gross and net wt

Ism certificate and explain abt it

Life raft regulation

Fire in purifier room full up co2

Co2 how to operate and why 85% regulation for releasing?

Life raft static and dynamic test ?

Annex 1 full marpol

Motor

**Rt flex and me differences**

**Pump used in rt flex**

**Alfa lubrication working in detail**

**Thrust block full why pads are tilted?**

**Rest don't remember.**

**9 Aug 21**

**Internal - GL Meena sir**

**External - Anil Bhat sir**

**Safety**

**What type of IG present in your ship? Various trips and alarms in IG**

**Pump room safeties and reg**

**Difference b/w pv breaker and pv valve**

**Emergency fire p/p reg**

**Heat detector reg**

**Smoke detector reg**

**Electrical**

**What is air gap?**

**What if the air gap is more?**

**And how much air gap should be present?**

**What is IM?**

**What is bus bar?**

**What is dead front panel?**

**What is overload trip?**

**What is preferential trip?**

**And how you will test preferential trip?**

**What is reverse power relay?**

**Different losses in transformer?**

**What is iron loss**

**What is copper loss**

**What is hysteresis loss**

**What is eddy current loss**

**What is slip in IM?**

**Why slip is provided in IM but not in synchronous motor?**

**Result- Electrical Passed**

**Safely Repeat**

**Motor, mep**

**Ext-anil**

**1. Indicator cards, types and description**

**2. how to detect early/late injection on draw card,**

**3. How to detect fuel injector leak in indicator diagram.**

**4. How to know faults in light spring card.**

**5. Detection of leaky starting air valve during engine running and at stop condition**

**6. Principle of hydraulic jack and the procedure for tightening.**

**7. How to remove a broken bolt or stud from a given location**

**8. How to detect shell type heat exchanger tube side leakage, and the remedy action for that.**

**Some more ,can't remember**

**Motor passed, mep repeat**

**9- Aug 2021**

**Ext-Anil bhat**

**Int- Meena**

**Types of lubrication**

**Difference between thick shell and thin shell**

**Refrigerant properties**

**Refrigerant lub oil properties**

**Remove air from reefer system**

**Hydraulic jack tightening**

**Reasons Increase in temp of one ME unit**

**Reasons Increase in temperature off all units**

**Thrust pad bearing clearance how to measure**

**Pipe fabrication**

**What maintenance is done on STP**

**Motor pass**

**MEP repeat**

**9/aug/2021**

**noida mmd**

**int-meena**

**ext - anil bhatt**

**started at 4pm tota time 1 hr**

**fun-3**

**Difference b/w codes and convention.**

wanted to know exact definition of code.

What is statutory and mandatory certificates.

what is GZ curve , how will you get GZ, GM,

WHY 57.3 degree angle.

angle of contraflexion , basically everything abt GZ curve.

Chapters of SOLAS .

Before i could finish answering he asked what is chapter 9.

then what is ISM.

what is the validity of D.O.C .

What is SMC .

What flooding system you had . ( CO2 I SAID )

What was it HIGH PRESSURE OR LOW PRESSURE.

(i had no idea that CO2 system have two pressure system ).

Regulation for CO2 room.

What is Safematic system.

How to take the carrier bearing wearout in rotary vane.

Then he asked will there be jumping clearance. ( i said no and the explanation)

DECIDER (which ship u work )

What is the purpose of Isolation valve.

deck isolation valve and engine room isolation valve.

action when you see man overboard and you are in midship with no comms.

What is Safematic system , he didn't accept the answer which Bhatt sir has accepted asking for more.

then purpose of P.V valve and P.V breaker. when will they come in role.

**fun-4b and 6**

**what are safeties in M/E.**

**alarm and slow down of m.e**

**what is mean piston speed ,**

**what will happen when this speed is crossed.**

**what is the shape of botton end bearing bolt of a.e.**

**why we need to change it.**

**what is galvanic corrosion , acidic corrosion, pitting corrosion.**

**difference between cast steel and cast iron.**

**what is carbo percentage in them. cast iron properties advantages of cast iron.**

**why it is hard to weld c.i , why u need to heat c.i before welding.**

**how will you reduce oxygen in bolier water.**

**what chemical you add in boiler water to remoce oxygen.**

**what is vit and super v.i.t , how they work.**

**what could be the reason for water coming in gear box side of purifier.**

**how will you remove m.e exhaust valve guide.**

**DECIDER for fun 6**

**low peak pressure in no.5 of a.e what will you do.**

**cylinder oil non flow alarm comes what will you do u are on watch.**

**how will you take clearance of thrust bearing.**

**funt- 5**

**what are the navigation lights alarm, ( had no idea )**

**what is blackout, how will you test blackout onboard.**

**what the various ways to change speed of induction motor.**

**type of induction motor.**

**what is squirrel cage induction motor.**

**what is slip ring i.m.**

**what is role of resistors in slip ring i.m**

**what are the resistances in transformer.**

**what is iron loss.**

**what is hysteresis loss .**

**what is eddy current loss.**

**some more in electrical.**

**external gave 3 and 6 and repeat 4b and 5**

**In decider internal decided to gave only 6 and 3 other repeat.**

**16/08/2021**

**MUMBAI**

**Int-Gauri lal Meena**

**Ext-Anil Bhat**

**Fn4b**

**\*What type of ship/main engine?**

**\*What is super long stroke, what is the difference between MC and MC-C?**

**\*What type of drive is used for camshaft in your main engine, what are the advantages of a chain drive over a gear drive?**

**\*What is erosion plug in fuel pumps?**

**\*How will you replace exhaust valve guide?**

**\*Local manouvering and what alarms can't be bypassed during crash manouvering**

**\*Why do we need an intermediate shaft in-between thrust shaft and tailshaft?**

**\*Piston ring clearances and how to measure**

**Fn6**

**Hunting gear and without it what might happen?**

**Follow up vs Non-Follow up and why two different methods?**

**How will you repair a main l.o. shell & tube cooler mid operation?**

**Difference between thick and thin shell bearings and where they are used**

**6305 ZZ bearing specifications**

**Oil in hot well sight glass, what does it indicate?**

**How will you repair damaged economizer tubes mid sea?(exact words)**

**Different types of steam trap and working of thermodynamic steam trap**

**How will you fabricate a new pipe if the previous one has been damaged beyond repair?**

**During mid decarb sudden notice from bridge to prepare engine. what are your actions?**

**16/8/2021**

**Anil & Meena**

**Mep**

**Stp maintenance**

**Piston burnt out, how to check?**

**Refer suction freezing, what is the reason?**

**Electrical**

**Diode**

**Starters**

**Transformer principle n types**

**Capacitor, diode how to test.**

**Current transformer where used?**

**Rectifier?**

**Brushless generator**

**Int- Purna Manji**

**Ext - Anil Bhatt**

**Safety**

**Type of ship**

**Fixed fire fighting system onboard**

**FF system in cargo hold**

**Detector in cargo hold**

**How it works.**

**All Marpol Annexs**

**Annex 5 amendments**

**ISM code**

**DOC**

**SMC**

**And few more**

**Time -15 mins**

**Result - Pass**

**Thank everyone especially Saheem bhai and Mayur bhai**

**COC** ❤️

**Int-manji sir**

**Ext-anil bhatt**

**Motor**

**1) type of ship**

**2) Nomenclature of main engine**

**3) Indicator diagram. Explain all 4 in detail and lot of cross question**

**4) ship camless Or camshaft**

**5) wht drive the camshaft**

**6) chain ans gear drive.. Advantage and disadvantaged and lot of cross question.**

**Result-PASS**

**Thank u everyone especially saheem bhai and pranav bhai**

**COC** ❤️

**Int-manji sir**

**Ext-anil bhatt sir**

**Safety**

**Type of ship**

**Block coefficient**

**Prismatic coefficient**

**GZ curve full**

**Sprinkler system and hypermist system difference**

**slip and real slip**

**Pitch ratio**

**Fire detectors**

**Which liquid is present in smoke detector (dnt know)**

**Colour of fire detector**

**What does red, yellow colour indicates in detectors at what temperature**

**Result-COC**

**Thank u everyone for your help... 🙏🙏**

**Internal : manji sir**

**External : anil bhat 🙏**

**Motor**

**Type of camshaft drive**

**Advantages disadvantage of chain and gear drive. Elongation%**

**Crankshaft type**

**Detuner function**

**Dampers working**

**Material of tie bolt**

**Difference between cast iron and cast steel**

**Steering gear type**

**How isolation is done**

**Locking arrangements**

**Engine overload conditions and lots of cross**

**Many more**

**Got coc ❤️**

**Thanks to each and everyone for your support 🙏**

**25/08/2021**

**Mumbai**

**Manjhi sir**

**Anil bhat sir**

**Electrical**

**1. Single phasing**

**How to protect moter from single phasing**

**2. Thermistor**

**3. Thyristor**

**4. Single phase motor**

**5. Why capacitor is there**

**6. Eddys current and how to prevent it**

**7. Hystresis loss and how to prevent it**

**8. Copper loss**

**9. Types of transformer**

**10. CT**

**11. Safeties on alternator**

**12. In safeties of alternator what is alternator and what is in MSB**

**13. Difference between relay and contactor**

**COC**

**25/08/2021**

**Mep**

**Anil bhatt**

**Manjhi**

**1) Centrifugal pump low pressure. Reasons and many x questions**

**2) How to adjust fuel pump timing**

**3) Mac relief valve lifted reason?**

**4) Cargo pump checks before discharge**

**5) Hydrophore air leakage what to do?**

**6) Motor dipped in sea water, what all things you do?**

**Int: Manjhi**

**Ext: Anil bhatt**

**Fn-3**

**Deadweight**

**Displacement**

**Grt , nrt**

**CO2 flooding system**

**Why time delay in CO2 system**

**Leak alarm in CO2 why?**

**Shell expansion plan**

**Sheer strake**

**Garboard strake**

**Steering gear operation**

**Some more forget**

**Fn6**

**Creep**

**Crack in pump casing ?how will u rectify**

**Pump casing material**

**Cast iron welding**

**How to adjust fuel pump timing?**

**How to remove valve guide of exhaust valve**

**Fn 3- pass**

**6 – repeat**

**MUMBAI**

**27/08/2021**

**Anil bhat**

**Subbarao**

**Safety**

**Buttock line**

**Margin line**

**Rudders**

**Solas chapter 12**

**Hypermist system**

**Types of detectors**

**Electrical**

**Types of AC motor**

**Synchronous motor**

**Brushless alternator**

**Why no slip rings**

**Hw it is excited**

**Navigation light alarm motor on main deck wht is their speciality**

**Earth neutral system**

**Insulated neutral**

**Dashpot**

**Motor**

**Engine nomenclature**

**What do u mean by compact engine**

**Thick bearing thin bearing**

**Hw labryinth seal works**

**Mep**

**Tig**

**Mig**

**Tap and rimer**

**Bearing nomenclature**

**Domestic ref suction side frosting**

**Hw to take M/E bottom end bearing clearance**

**How to renew exhaust valve guide**

**got motor**

**31/08/2021**

**Int- Gauri Lal Meena**

**Ext- Anil Bhatt**

**Motor**

**1. Type of Engine**

**2. Difference between RTA and RT Flex**

**3. How much pressure in FO rail and how it is developed**

**4. Interlock on ME**

5. Explain starting air line and safeties on it
6. How will you know leaking starting air valve
8. Firing order and its significance
7. Type of turbocharger and its lubrication
8. Matching of turbocharger
9. VTG
10. Type of compressor and why 2 stage

**MEP**

1. Overhaul of exhaust valve guide
2. How will you find out leaking tube on shell and tube condenser

**Motor Pass, MEP Repeat**

**31/08/2021**

**MUMABI**

**Int-Meena sir**

**Ext.bhatt sir**

**Motor/Mep**

**Type of ship/engine.**

**Vit/super vit difference.**

**Which type of Fuel pump.**

**What is puncture valve,how it actuates(by stop signal n control air).**

**What is thick and thin shell bearing where it is used.**

**C/H lubrication how to achieve in B&W.**

What is hydrodynamic lubrication.

\*Ionization type smoke detector 😊 (cannot answered).\*

\*Steam trap fuction(latent heat he want to listen i cannot explain properly)\*

Piston pressure test

Refere room not getring cool.

What is defrost how it is achieved.(he want to listen warm water)

Centrifugal pump not developing pressure reasons?

MEP pass 😊

Motor repeat(because ionization and steam trap)

31/08/2021

mumbai

External Anil bhatt sir

Internal Meena sir

Safety

Codes & Convention

Prismatic coefficient

Block coefficient

Gz curve explanation

Firefighting system on board

Hypermist working

Garboard strake, intercoastal girder, coffin plate,

Floors

Frames

Electrical

Different induction motors

Difference between slip ring and squirrel cage

What is High voltage, advantages/disadvantage

HV safeties

Vcb n Acb difference

Msb safeties&maintenance

Brushless generator explanation

Meena sir

Anil bhat sir

motor mep.

different bw mcc and me engine.

How fuel generating pressure in me engine

boiler safety vv egb safety vv different

accumulation test.

Mcr governor types. Governor droop.

Working of gov.

Interlocs working

air conditioner unloader working

improved safety vv

explain

indication of overloaded engine

2s 4s governor diff.

Result. Said 4b good need to study f6 more

15/09

**MMD NOIDA**

**SUBBARAO SIR**

**ANIL BHAT SIR**

**ELECTRICAL**

**\*Generator connection Star or delta**

**\*Generator losses**

**\*HV advantages disadvantages**

**\*Hysteresis losses**

**\*Induction motor and classification**

**\*Insulated earth neutral system**

**\*How to find earth fault**

**\*ACB vs VCB diff. maintainance**

**rest forgot**

**SAFETY**

**\*Steering safematic system (Bhai automatic isloation for unit start automatical second unit if any leakage Wo wala bola)**

**\*Annex name**

**\*Explain annex 6**

**\*Low pr. high pr. Co2 System diff.**

**\*Explain Low pr. CO2 system**

**\*Steering motor safety if one motor running (Locking arrangement)**

**\*Bottock line , bilge keel and location**

**\*GZ curve**

**\*permeability of ship**

some forgot

GOT SAFETY ❤️

NOIDA

SUBBARO SIR

ANIL BHAT SIR

Safety

1) chapters of solas

2) GZ curve

3) Portable Fire Extinguisher

4) Collision Bulkhead

5) EEDI n EEOI

6) chp 12 of SOLAS

And sbme cross ques

NOIDA

SUBBARAO SIR

ANIL BHAT SIR

Electrical:

1) Relay vs Contactors

2) HV system full

3) All starters in depth, timing n working, switching operation

4) Generator not producing voltage, how to rectify

5) Producing but not rated

6) Producing but not coming on load

And are you sure about it in every ques 😊

15/09

SUBBARAO SIR

ANIL BHAT SIR

MOTOR MEP

Thrust bearing clearance

VIT and super VIT diff

ME and AE diff governor

Accumulation of pr test

How to remove O2 form boiler

Putting and hydrogen corrosion.

Crankshaft material, bed plate material and Tie rod material and there purpose

Electronic governor

Etc

NOIDA

SUBBARO SIR

ANIL BHAT SIR

MOTOR

Mc c xxxx

Type of turbocharging xxx

Chain drive xxxx

Gear drive xxxx

Thrust block xxx

Generator type xxxx

Centrifugal xxx

**Advantage and disadvantage of chain drive and gear drive**

**Swash plate pump xxx**

**Time for change piston and exhaust valve**

**Electromagnetic brake xxx**

**Light spring xxx**

**Power card cxx**

**Draw card xxxx**

**Compression card xxx**

**SUBBARAO NAY FAIL KIYA SUB BATAYA PHIR BHI**

**NOIDA**

**15/09**

**SUBBARAO SIR**

**ANIL BHAT SIR**

**Safety**

**Mast riser it's regulations**

**Pv valve and pv breaker and set points. Too many cross.**

**Ism full**

**Protection against pitching.**

**Parametric pitching ya rolling (naam hi nhi sunna tha)**

**Steering gear.**

**Type of rudder everything related to it.**

**Bhai construction m ghuss gya fr aur esa ghussa ki mai fass gya. Terms sunne hi nhi the ese.**

**Maintenance on hypermist system**

**Motor**

**Fiva valve working**

**Alpha lubrication**

**Torsional vibration**

**Working of axial damper**

**Detuner**

**Top bracing**

**How servo pump works in ME engine**

**How interlocks of main engine function. How they stop control air .**

**Water hammer steam hammer.**

**Steam traps**

**Material of steam trap**

**Many more.. i forgot.**

**Electrical**

**Vacuum circuit breaker its working**

**How bus tie works. Ispe bhot cross questions.**

**Air gap and cross question**

**High voltage questions.**

**Many more i forgot.**

**3 & 4b repeat**

**Electrical done. @FSI Saheem Khan PDI your notes helped a lot.**

**Bhai kunjai shah is not enough for naval architecture. There were many questions which i never heard of in naval architecture.**

**Material of ionisation type smoke detector plates**

15/09/2021

Noida

subbarao sir

Anit Bhatt sir

adha kharab adha bdiya 😂

**Fn4b &6**

Sare mix h to bhai dkh lio konsa kiska h

1.how to order bolt

2.how to order grinder wheel

3.crankweb deflection (maine crankshaft deflection bola )

4.how many hours we take deflection

5.how many hours we do M/E decrab.

6.exhaust v/v overhaul after how many hours .

7.type of vibration (axial and radial)

8.what is axial vibration and how to minimise

9.detuner

10.T/C lubrication where pump is fitted which type of pump.

11.k value and L value ..air clearance

12.type of bearing in T/C

13.how blades is fitted in T/C

14.laybirth seal what it do

15.how to remove broken stud . speciality of excretor bit & stud excretor .what excrator bit do

16.unloading mechanism in refer system

17. centrifugal pump not taking suction ..told everything then said okk ..he he ask suppose all you tell are in good condition but still not taking suction then m phirse same btane lga ..to bola pum ke bhar diqat ni h andar h what u will check during overhaul..then told wear ring worn out or mechanical seal leakage ..then said okk

18. check for overhauling centrifugal pump.

19. NDT test

20. magnetic test pucha to isme bola sir radiology ya ultrasonic puch lo vo dono aate h tb hasne lga bol koi baat ni phr next ques.

21. cocktail effect (ye to pheli bar suna)

Bhai jo direct ques the unme to btaya but cross ques me fasa diya ..

Result ...fn6 clear

fn4b repeat

Noida

15/9/21

Subbarao sir

anil bhatt sir

When ship moves from fw to sw what things will change?

Margin plate

Sheer strake

Framing

Margin line and its relation with plimsoll line

How much area smoke and heat detector covers?

New amendments in annex4,5,6

If ozone released in atm where you will enter?(ods record book)

Nox technical file

Stiff and tender ship, which is preferred?

**Dynamic and static stability**

**Damage stability**

**Diff bet pfe and spfe**

**maintenance on pfe**

**MMD Noida**

**Function 3**

**Ext - Anil Bhatt**

**Int- Subbarao**

**Type of Ship ( LNG)**

**Type of Tanks**

**Which type you had**

**How was it fitted to hull**

**Daily BOG**

**Insulation Material of tank**

**Fixed system in Engine Room**

**Hypermist Testing and type of pump.**

**Flame detector activation temperature in Hyoermist**

**Mast riser regulations**

**IGC and IGF Code difference**

**Definition of Liquified gases**

**Margin Line**

**GZ Curve**

**How to get Intial GM from it and why ordinate is taken at 1 radian.**

**Angle of Loll and how to reduce it.**

**Steering Gear regulations**

**Result – Pass**

**20/09/2021**

**MUMBAI**

**Meena sir**

**Anil bhat**

**SAFETY asked by Meena sir**

**Which ship**

**Cargo carried**

**Peculiarity in carrying iron ore**

**Mositure content. Why is it important**

**Sagging and hogging**

**Collision bulkhead**

**Enclosed space entry**

**Fire fighting in cargo space**

**Fire fighting in E/R**

**Water sprinkler system**

**Cross question on each question**

**Electrical: all ask by Anil bhat**

**Induction motor types**

**Transformer types**

**Zener diodes**

**Types of fuses**

**Explain HRC**

**Thyrostor**

**Thermistor**

**Lots of cross question on each question**

**Some more can't remember**

**Internet connectivity was very poor didn't hear the result.**

**Mumbai**

**20/9/21**

**Internal:**

**Gauri lal meena**

**External:Ani bhat sir very nice person**

**Flare**

**Marpol annex all**

**4,5 Amendment latest**

**Gunwale**

**Margin line**

**Permeability 100percentage means ER accommodation how much**

**Co2high pressure low pressure diff**

**Time delay unit**

**Leak alarm**

**Intercoastal girder**

**Bw management d1 D2 means**

**Shell expansion plan**

**Watertight weather tight difference testing**

**Few more forget**

**Result: pass**

**Thanks 🙏🙏🙏🙏 shaheem bhai all orals cleared**

**22 sept**

**Subba rao sir**

**anil bhat sir**

**4b and 6**

**1) Starting air line interlocks**

**2) what type of governor in your ship and what is droop.**

**3) boiler water treatment.**

**4) what is the use of accumulation pressure test.**

**5) VIT, SUPER VIT where u connect.**

**6) NPSH and NPSHr**

**7) air cooler efficiency decreased what indication u will get.**

**8) how fabricate a pipe.**

**Many more**

**Result:4b**

**Function 6 repeat**

**24 sept**

**Anil bhatt**

**Subbarao Sir**

**How will you take out exhaust valve guide?**

**2g,3g,4g**

**Tig vs mig**

**Shell and tube type heat exchanger leak**

Piston ring clearance

6305zz bearing specification

How will you find out air starting valve is leaking?

Result - Pass

Thanks a lot saheem khan bhaai ❤️

Subbarao sir asked about what if ig o2 content increases what will happen?

Gear and chain drive puchne wala tha but boldiya me engine tha 😂

24 Sep 2021

Mumbai

Subbarao ❤️

Anil Bhatt ❤️ ❤️ ❤️

Safety

Shell Expansion plan xx.

Continuous Synopsis report.

Loadline, what will happen when ship goes to sw from fw.

Bulk carrier safeties (told chapter 12 of solas) xxx.

Fixed fire fighting system.

Fire extinguisher.

Portable and semi portable

Foam extinguisher.why chemical foam not used.

Lifeboat load test static and dynamic.

Anti caking and which dcp powder used.

EEDI and EEOI difference.

Result-Pass

**Electrical**

**Type of transformer.**

**How residual current is stored.**

**Insulated neutral and earth.**

**Result-Repeat.**

**24/09/2021**

**Subbarao sir**

**Anil bhatt sir**

**Function 3 safety**

**Type of ship**

**Which code is applicable igc or igf**

**Types of tanks (LNG carrier)**

**Insulation material**

**Boil off rate of LNG**

**Statutory certificates and mandatory certificate difference**

**Which type of life boat**

**Static and dynamic testing of life boat**

**Types of rudder**

**Rudder is hollow or solid?**

**If solid, what will happen**

**Rudder drop**

**Jumping clearance**

**What type of fixed fire fighting system on ur ship**

**Hypermist sytem explain**

**Detetectors for hypermist system**

**How flame detector works**

**Type of pump for hypermist system (Fresh water or sea water)**

**How is sprinkler system different from hypermist system.**

**Orange red and blue bulb temperatures**

**Parametric rolling and pitching (dont know)**

**Function 5 electrical**

**High voltage system advantages and disadvantages**

**Single phasing and how to prevent**

**If generator not developing voltage what will u do**

**What to do if residual magnetism is lost**

**Where is exactly is the excitation given in generator (dont know)**

**Types of induction motor**

**Where slip ring motors are used**

**How are slip ring motors different from induction motors**

**How is speed of motors controlled**

**Rest forgot**

**Result: both pass**

**Cleared all 4 functions....thank you sahim bhai...your channel helped a lot...truly thankful to you for the help...🙏**

**MUMBAI MMD**

**24/09/20121**

**INT- SUBBARAO**

**EXT- ANIL BHAT**

**FUN-5 ELECTRICAL**

- 1. Operating Principle of Induction motor**
- 2. Types of Induction motor**
- 3. Difference between wound type and squirrel cage IM**
- 4. Advantages of wound type over squirrel cage**
- 5. Alternator Safeties**
- 6. What is HV and application**
- 7. Advantages and disadvantage of HV**
- 8. Safeties on HV**
- 9. Transformer Losses( specifically asked hysteresis loss)**
- 10. Lenz's law**
- 11. Generator not developing Voltage reasons**
- 12. Procedure to recover residual magnetism**
- 13. Difference between Thermostat, Thermocouple, Thermister**

**Result – Pass**

**29/09/2021**

**1st attempt**

**Subbrao sir and anilbhatt sir (both are good)**

**Fn 4b and 6**

**Show passport and tar book**

**Indos No. Name**

**Fn 4b**

- Engine type and specs.

- Types of lubrication

which type in my ship

- Why its difficult to lubricate cr.head

- How crosshead bearing lubricated,

- thinshell and thickshell bearing with example

- how camshaft rotates (how to check the tightness of chain (he want proper answer he is not satisfied), how to tighten it)

- What is T/C ( how blades are fitted, what type in my ME, advantages of const.pr type, types of bearing used)

- what is labrynth seal ( material (kabooth) and its working)

- how to remove exhaust valv guide bush ( how valv spindle fitted to the valv )

Fn 6

- how to fabricated pipe with zig zag bending (not straight) (i told everything but my ansr not accepted)

- boiler accumulation rp test

- refer compressor V belt how to tight? ( How to know the belt is reusable or not ( he is not satisfied)

- AC compressor unloading mechanism working

Result- fn 4b pass fn 6 repeat

😊 Thank you saheem bro 😊 for your Youtube videos and notes it helps me alot.

29 Sept

Subbarao

anil bhat sir

Motor

Mep mip

**Exhaust temp going up on**

**one unit and all units**

**Overloading in detail**

**Exhaust valve opening timing how to figure out**

**Surging**

**Vernier calliper**

**How to overhaul globe valve**

**Got 4b**

**mep repeat**

**Mumbai mmd**

**Subbaro sir**

**Anil bhat sir**

**Type of ship and engine**

**\*all four\***

**safety**

**1. watertight door weathertight door x que**

**2. cargo hold fixed firefighting system x que**

**3 freefall lifeboat maximum launching speed**

**4. solas chap all names and explain chap 12**

**5. static dynamic load test of davit and x que**

**6 ODS**

**7 types of floor and cross question**

**8 GZ curve and x why only 57.3 degree**

**Electrical**

**1 alarm in navigational lighting**

**2 earth fault 220 and 440. how to find**

**3 types of fuses**

**4 ESB safeties x que**

**5 windlass motor safety x que**

**6 types of losses in transformer**

**7 why air gap is there in alternator and value**

**8 function of heater and how to operate it x que**

**Mep Motor**

**1. How galvanising is done in pipe and why we need?**

**2 ws exh valve how guide is fitted**

**3 why we turn quarter turn in jack. x que**

**4. Me engine how cylinder lubrication takes place x que**

**5 How to simulate lub oil low pressure alarm**

**6. Function of stagnation control valve**

**7 how to check lub oil high level alarm**

**8. Sterntube fwd seal tank is overflowing reason**

**9 how iccp works**

**10 what is hydrogen corrosion how to reduce oxigen in boiler water x que**

**11 difference between tig mig**

**12 bearing 6305zz**

**13 sewage test and values**

**14 ht It water test**

**15 types of vibration and detuner how to avoid and x question**

**16 how many cylinder to require to starting and x que**

**17 head or liner crack how to find and how to know whether jacket crack or liner crack**

**18 types of wear in liner and x que**

**19 how many clearances are there in cross head**

**20 how galvanising is to be done in pipe and why?**

**21 sfoc**

**22 how expansion valve control constant degree of superheat**

**23 spheroidal heat treatment and why we do heat treatment**

**Got 3 function 6 repeat**

**Very big thanks to @saheem4**

**18 oct**

**mumbai**

**Ext subbarao**

**Int Anil bhatt**

**Function -motor**

**Rta vs rtflex**

**Pulse lubrication full and x questions .**

**All indicator diagram full explain in details .**

**What is overlap period .**

**Hydrazine in boiler**

**Priming and foaming in boiler and effects of it .**

**Rest forgot**

**Result =pass**

**Ext : Anil bhat**

Int : Meena

Mumbai mmd

25/10/2021

Function - MEP

1.What major maintenance you carried onboard? (I said Linear change)

2.How liner calibration is done?

3.In liner calibration how you know it's exact diameter?

I said we will use template place the dial guage and move it, the largest reading is the exact diameter

4.In what Direction you measure? And why? Port star board and because of side thrust

5.How will you construct a long 2m Zig-Zag piping? Took lot of time in this, I Didn't answer well, everything he disagreed 😓

6.How to charge oil in refer crankcase?

(Same textbook procedures I said - vacuum and hand pump method)

7.What is Nitriding? Where those material used?

(Cam, gears, crankshaft)

8.Difference between Case Hardening and Nitriding?

9.What is annealing?

10.What is Normalising?

Result - COC 😊

Anil Bhat ❤️ is nice guy (he actually skip the question if I stuck and ask me something more easy)

🌟 Thank u everyone for your valuable help! 🌟

Saheem has made some really good and useful study material. Thanks bro!!

[Please go through oral questions of that external on same day]

Mmd Mumbai

25/10/2021

Int- Meena 

Ext-Anil Bhat 

Fn3

- What is Ballast water management, why required.
  - What is D1 and D2 standards
  - What system was there onboard your ship for BWM.
  - What entries are made in ballast log(I said don't know)
  - What are plate floors, girder, types of girder, what is intercostal girder.
  - Type of fire fighting system for engine room
  - Working of hypermist system. How will you test it.
  - difference between hypermist and sprinkler system.
  - co2 maintenance 1 , 5 and 10 yearly
  - What is ORB, weekly entries made.
  - Type of LB onboard ur ship.
  - Lifeboat testing (static and dynamic). Where it is done and why not onboard.
- Internal- Which type of ship, pump room safety.

Coc 

Thank you all for your help. Special Thanks to Saheem Khan.

25/10/2021

External: Anil bhat

Internal: Meena sir

Function3

- 1) Type of ship (bulk carrier)
- 2) Special requirements for bulk carrier (SOLAS 12)
- 3) Water tight door and whether tight door xx
- 4) Life boat static and dynamic testing
- 5) Cargo space fire fighting , location of detector
- 6) what is high pressure CO<sub>2</sub> and low pressure CO<sub>2</sub>
- 7) fire fighting in CO<sub>2</sub> room

#### Electrical

- 1) type of transformer
- 2) losses in transformer
- 3) alarms navigation light
- 4) earthed neutral and insulated neutral
- 5) why transformer is rated in KVA

#### Meena:

Bulk carrier additional requirements

Purifier room fire fighting

25 oct

mumbai

Internal Meena (super human)

External Anil Bhatt sir (dev manus)

1. Bilge suction valve damaged , no spares & lapping not effective what would you do ( I said seat cutting )
2. How to do seat cutting .

3. Motor salvaging.
4. Exhaust valve guide renewal .
5. Oxy acetylene safeties .
6. 2G ,3G & 4G welding .
7. Difference in TIG & MIG welding .
8. Liner calibration & why we do take readings for p-s & f-a
9. How to take thrust block clearance.
10. 6305zz bearing what it is ?
11. Con-rod ovality check .
12. Cylinder head pressure testing

COC 

Result ~ 4 sahab bann gaya

25.10.2021

Mumbai MMD

Ext. Anil Bhat Sir 

Int . Gauri Lal Meena Sir 

Fn 5

Synchronous motor vs induction motor

Synchronous motor working principle

What is slip

How to control speed of motor

Applications of wound rotor and squirrel cage rotor

Applications of synchronous motor

Generator not producing voltage reasons

**How to do field flashing**

**Generator producing voltage but not coming on load reason**

**What is droop**

**What is IP56**

**Type of rotor used on biggest pump on ship**

**Power factor improvement method**

**What is power factor**

**Why to increase power factor**

**Transformer principal**

**Transformer types**

**Why no DC in transformer**

**Passed**

**Internal Meena (**

**External Anil Bhatt sir**

**Function..mep**

**How to order bolt and grinding wheel when you don't have impa**

**Overhauling globe valve and material of valve seat**

**How do you fill lube oil in domestic refrigerator**

**Reamer tool and tap**

**All the heat treatment process and application**

**How will you replace valve seat**

**Centrifugal pump overhauling**

**Purpose of lantern ring**

**Fretting and pitting corrosion**

**1g 2g welding**

**Thank you everyone**

**And like everybody address love you saheem Khan bro what you did is  
indelible.....COC **

**29 OCT**

**MEENA SIR**

**ANIL BHAT SIR**

**Fun 3 mostly asked all the deadwights just confused in everything**

**2 CO2 system**

**3 safematic system proper**

**4 cargo linkage in pumps how to know.**

**Elect**

**1 motor used in steering and difference betn normal and steering motor**

**2 neutral and earth earthing system**

**3 3 wire system and 4 wire system**

**And many cross questions**

**29/10/21**

**Ext: Anil bhatt sir**

**Int: Meena sir**

**Motor**

**Me type**

**Turbocharger type and construction**

**K value**

**Labyrinth seal material**

**VTG**

**What is Detuner**

**Torsional vibrations and how to dampen it**

**Guide bushes**

**Types of corrosion**

**Hot corrosion and cold corrosion**

**How will u replace guide bush in exhaust valve**

**Graphiting**

**How will you find air starting valve leaking while stopped**

**How to adjust fuel pump timing**

**MEP**

**Drier chocked, how will u find out?**

**Boiler water liquid coagulation**

**29 oct**

**MEENA SIR**

**ANIL BHAT SIR**

**Fun 4**

**Me nomenclature**

**Adv n dis of chain drive n gear drive**

**Piston cooling**

**Adv n dis of oil n water cooled(atlest 5 pt)**

**Material of piston, what all is there in piston**

**Detuner**

**Tortional vibration(how to reduce)**

**Fresh water treatment**

**Foaming n priming**

**Steam trap**

**Accumulation test**

**Cast iron**

**Difference betn cast iron and steel**

**Advantage n disadvantage of cast iron**

**Ionization smoke detector**

**Fun 6**

**How to weld zig zag pipe(whatever u say he will not agree)**

**Difference betn case hardening and nitriding**

**Difference betn annealing and normalizing**

**And more cant remember**

**Got fun 4.fun 6 repeat**

**Meena sir come and said bass karo sir.. Kitna puchoge**

**29/10/2021**

**Internal : Meena**

**External: Anil bhat**

**Motor and Mep**

**1.Type of ship and Engine (6S50MC)**

**2. What is 'C' in MC engine.**

**3.How Camshaft is driven**

**4.What are the advantages of Chain drive.**

**5. Thrust Bearing construction.**

6. Why tilted pads on thrust bearing?
7. How to measure thrust bearing clearance.
8. Safeties in Refrigeration system.
9. How do you know if Main compressor suction and discharge valve leaking
10. What is Annealing, Case hardening and Nitriding.
11. What is Fatigue failure?
12. What is Creep?
13. What is Follow up and Non follow up.
14. What is the function of Hunting lever.
15. In 6305ZZ bearing what is 6,3,05 and ZZ.

Few more cross questions.

Motor Pass

MEP Repeat

INT : meena sir

EXT: anil bhat sir

Safety

Windlass break test

Life boat static and dynamic testing

Coffer dam regulation

Air pipe and sounding pipe regulation

Vent pipe

Co2 high pr and low pr

CSR

Int :- Meena sir

**Ext:- Anil bhatt sir**

- 1. Type of engine**
- 2. RT flex and RTA engine diff**
- 3. Type of lubrication system on your ship**
- 4. Pulse lubrication**
- 5. Thick shell and thin shell bearing**
- 6. Thick shell bearing advantage**
- 7. Crosshead bearing clearance**
- 8. Thrust block**
- 9. Thrust pad shape**
- 10. What if the shape of the pads are rectangular**
- 11. Refrigeration capacity regulating valve working**
- 12. Indicator card**
- 13 . Exhaust temp high one unit and all unit**
- 15. Npsh....npsha and npshr**
- 16. Refigerant lubricating oil properties**

**12-11-21**

**int-siresh sir**

**ext-anil bhat**

**Fn-3, Safety**

**PV valve**

**PV breaker**

**Mast riser and its height**

**SCBA and EEBD difference**

**How to fill SCBA onboard**

**What is frame**

**What is floor and types**

**Static and dynamic Testing of lifeboat**

**What kind liferaft was there**

**Watertight and Weather tight door and its testing**

**Where these doors are fitted**

**Type of fire fighting system in Engine Room**

**Acetylene Bottle safety**

**Is Annex 2 Valid on your ship (No...Crude oil Tanker)**

**Result: Cleared**

**Special Thanks to Saheem Bhai**

**NOIDA**

**12/11/2021**

**Internal: shrish sir**

**External: anil bhat sir**

**Function 3**

**1.GT**

**2.NT**

**3.DWT**

**4.LWT**

**5. Permeability**

**6.shall expansion plan**

**7.DPA and duty of DPA**

**8.annex 1 engine room bilge discharge criteria**

**9.flame eye**

**10. Type of sensors used in engine room**

**11.what type of sensors used in galley and working**

**11.What type of sensors used in boiler and incinerator and working..**

**Some more questions**

**Function 5**

**1.Msb safety**

**2.Death front panel**

**What is mean by insulation resistance value**

**3. IR value for new winding**

**4. Low IR value**

**5.what happens if IR value below 1**

**6.what is Earth neutral system explain**

**7.What is the insulated neutral system and explain**

**7.advantages of earth and insulated neutral system**

**8.fuse type and its function**

**9.Emergency generator weekly test**

**10. Emergency generator load test**

**11. How msb and esb connected**

**12. What intrinsically safe circuit**

**Results**

**Fun 3 repeat**

**fun 5 pass**

**Safety**

**Ext: Anil Bhatt**

**Type of ship**

**Anx 1 discharge criteria+ special area definition and difference between area and other area**

**Gz curve**

**Initial gm**

**Gz curve**

**Angle of loll**

**How to correct it**

**Cross curves**

**Angle of contraflexure**

**Flare**

**Fire fighting system installed**

**Difference between hypermist and sprinkler**

**Different bulbs used in sprinkler**

**CO2 regulation**

**Leak off alarm**

**How to make sure 85 percent discharged in 2 mins**

**Parametric rolling**

**Audit conducted on ship**

**Who conducts it**

**Flagstate vs port state**

**Result : pass**

**Thanx to rab k bande @saheem bhai**

**Anil Bhatt**

**Sirish**

**Bulwark**

**Shoe plate**

**Lifeboat regulation**

**Solas training manual**

**Parametric rolling**

**Ism**

**How to know ism is effective on ship**

**More forget...**

**Most of the questions were from previous questions of anil Bhatt and were repeated**

**Result pass COC **

**THANKS TO SAHIM BHAI AND EVERYONE IN THIS GROUP**

**12 nov**

**noida**

**External: Anil Bhat**

**Internal: Shrish kumar**

**MEP MOTOR**

**12/11/2021**

**RTA versus RT Flex.**

**Control oil pump type.**

**Can gear pump build 200 bar pressure?**

**Interlocks of main engine.**

**Scuffing. CloverLeafing.**

How xhead is lubricated in Sulzer?

Why it is difficult to Lubricate cross head.

How turning gear interlock works.

Limit switch is stuck. Now what is preventing air from going Inside the cylinder.

How saftey valve works

Main engine fuel pump type.

Why compression in two stages.

What determines air bottle size?

Why six starts?

What is hot corrosion? What is called cold corrosion?

Ballast pump casing is damaged n have hole cannot do cold repair. And need to use the pump.

Valve is badly damaged tried lapping, but still not holding. What will you do?

Isothermal compression adiabatic compression.

What is oxy-acetylene welding? Safeties of oxy-acetylene welding?

Stress relieving.

Axial, piston pump how it works.

Cast Iron Welding.

Main engine Main bearing. It got tuck while taking out. Now. What will you do? How will you take out?

How piston is cooled? What is the advantage of Oil Cooling. What is the the disadvantage of oil cooling?

How to check fuel pump timing. When there is no marking on fuel pump and no marking on flywheel

Steam trap. Why are using them?

Zig zag pipe welding

**Decider question.**

**How will you check boiler low low level alarm?**

**Thank you all. Keep posting questions. It really helps.**

**Thanks saheem bhai.**

**Got both**

**Internal : Majhi sir**

**External : anil bhat sir**

**Function 5 ( Electrical)**

**What is mean by brushless.**

**How is the current present their for self excitation.**

**What dc excitor rotor made of.**

**Rectifier rotates with shaft then how ac is converted into dc.**

**Which materials have Residual magnetism.**

**Commutator & rectifier difference.**

**Relay & contactor difference.**

**How star connection changes to delta connection in star delta starter.**

**Soft starter & auto tranformer stater difference.**

**How msb connected to esb.**

**Esb definition.**

**Where is shore connection given.**

**How to stimulate reverse power trip without starting generator.**

**How to rectify the earth fault without stopping the machine.**

**How half & full wave convert ac to dc.**

**Where is dash pot provided & why & how it works.**

**If earth fault happens in steering gear system when out at sea...how u will rectify it.**

**How will u rectify 220v & 440v earth fault without stopping the machine.**

**Duration 30min.**

**Repeat (said good in theory but practically need to know more things)**

**Internal- Manjhi sir**

**External- Anil Bhatt (very helpful)**

**Type of engine**

**Make and model**

**Types of cards**

**Cross question on Draw card**

**If leaky injector which card will it show you on**

**Why 90 degrees out of phase**

**Phosphate test ?**

**Why ?**

**Priming and foaming.?**

**Types of turbocharger**

**Methods of turbocharging**

**Material of blower and turbine.**

**How it's the turbine side fitted**

**What is K value**

**How do you find it**

**Advantages of oil cooled piston**

**Disadvantages also.**

**How to change timing of fuel pump**

**How will you know the timing of fuel pump is wrong ( I messed up here )**

**Changed gland packing of pump. Yet it is leaking.**

**What to do ? Also couldn't answer**

**Result : motor pass**

**Mep repeat.**

**25 Nov**

**mumbai**

**Internal - Purna majhi sir**

**External - anil Bhat sir**

**Mep/motor**

**Type of engine**

**Difference between MC and MC-C**

**What is axial vibration.**

**What is torsional. vibration, ho to take care**

**2g 3g 4g welding**

**How to take main bearing and bottom end bearing clearance.**

**Refragent properties**

**Refer compressor LO properties**

**What is steam hammer / water hammer**

**What is steam trap.**

**Suction side of refer compressor frosting reasons.**

**Starting air interlocks**

**Turning gear interlock working**

**25th Nov 2021**

**Internal:- Manjhi Sir**

**External:- Anil Bhat**

**Function 3**

**Point of contraflexure**

**Sheer strake**

**Dead stability**

**Metacentre**

**Position of metacentre in dead stability**

**Type of lifeboat**

**Deadman handle**

**Lowering of lifeboat**

**Lifeboat regulations**

**CO2 system safeties**

**How to weight the CO2 bottle, what precautions you will take**

**Where safety valve is fitted in CO2 system**

**Why time delay is provided**

**Why bursting disc**

**Ventilation in CO2 room**

**What is the difference between CO2 alarm and fire alarm and general alarm**

**Function 5**

**What is single phase**

**Difference between commutator and slip ring**

**Difference between contactor and relay**

**Type of induction motor**

**How squirrel cage induction motor works**

**Why single phase motor is not self starting**

**Arrangement for starting single phase motor**

**Function 5 Clear**

**Function 3 Repeat**

**Said you have good knowledge but need little bit practical knowledge repeat function 3(I got stuck in CO2 total flooding questions 😞 )**

**25 Nov 2021**

**Manjhi Sir**

**Anil Bhatt Sir**

**F3**

**Difference in sprinkler and hypermist**

**Quatazoid temp**

**PV valve PV breaker diff**

**At night any difference in PV valve operation - I said no difference**

**Lifeboat regulations**

**Dead man handle**

**Foam ingredients**

**Diff in high exp and low exp foam xxx que**

**Low pressure and high pressure CO 2 system - difference and where they are used**

**What is margin plate**

**What is gunwale**

**What is hopper tank**

**Diff in sprinkler and hypermist- why sprinkler not used in ER**

**Also diff in MLC and STCW**

**And few more**

**F5**

**U have 2 gen and one of the Avr is faulty how will u manage till next port..**

**I only said current flowing will be different KVar load sharing effected.**

**Induction motor**

**Navigation light safeties**

**MSB and ESB xxx que**

**Limit switches**

**And many more**

**Result Pass**

**Thanks to Saheem bhai**

**02 dec**

**NOIDA**

**Motor mep**

**Meena sir**

**Anil bhatt sir**

**1) engine specification for ME and AE**

**2) tell firing order of ur engine**

**3) type of turbocharger on AE and how to do grouping**

**4) fw principle nd cross question**

**5) significance of gravity disc**

**6) difference in obornad refer nd domestic refer at home nd oil properties**

**7) steering gear air interlock nd how to purge 8) gear pump overhaul nd backlash how to measure**

**9) temp of meat room not coming down reason 10)refer short in compressor how will come to know**

**Rest forget**

**2 DEC**

**NOIDA**

**anil bhat**

**meena sir**

**How to remove exhaust valve guide**

**Capacity controller in ac system**

**Zig zag pipe fabrication**

**Detuner location function**

**Cankcase checs**

**Saftey in cylinder head lifting**

**Injection timing setting of furl pump**

**Resonance and vibration**

**How to reduce tortional vibration**

**Tappet clearance**

**Big end bearing clearance how to take and value**

**Type of indicator dig**

**Draw cards how it is 90degree out of phase**

**Why we take draw and spring card**

**What is your ship and specifications Mc or ME**

**Chain drive or gear drive**

**Advtg of gear and chain drive ..disadvantate**

**How to take tappet**

**Diffrent types of fuel pump**

**Decider - how to mark tdc on flyweel and how to mark injection timing of fuel pump**

**Thrust block location purpose ...thrust bearing clearance...**

**Governor it controls load**

**Internal:Meena**

**External:Anil bhat**

**Safety 2nd attempt**

**1 how will you know if there is leakage during cargo Operation.**

**2 enclosed space entry**

**3 which code is applicable on your ship**

**4 block coefficient**

**5 prismatic coefficient**

**6 difference betn watertight and weather tight door**

**7 where watertight door is located**

**8 rudder aspect radio**

**9 semi balance ruder why is called semibalance and how much part is located aft.**

**10 gz curves**

**11 x axis y axis what is there**

**Itna hi yaad hey sala kabi suna nahi eshi chijey puchta hey**

**Result:Fail**

**Safety me**

**Anil bhatt sir hai to**

**Watertight weathertight door puchega hi puchega,**

**Gz curve puchega and why 1 rad puchega bhai log.**

**Electrical me**

**Types of transfromer and dc or ac(dc transformer nh rehta kabhi)**

**Fun 5**

**Int meena**

**Ext anil bhat**

**Alternator safety**

**Semi conductor**

**Zenor diode**

**Scr and where use**

**Transformer and its rating and why**

**Motor rating**

**Int**

**Difference between high-voltage and lv**

**Explained everything in detail, so they don't ask much cross**

**Result pass**

**COC **

**Big thanks to Jacob sir for your valuable guidance, you will remain in our hearts **

**thanks to amal anoop ShaRukh and saheem..**

**Purna majhi**

**Anil bhat**

**Function 3**

**Safety..**

**1.wt is dead weight,GT,nt**

**2.wt is garbord starke**

**3.wt is safe matic system of steering gare .**

**4.wt is ballast water management plant....in..ur ship..is there?**

**5.why time delay in CO2 system....,CO2 alarm is general alarm?... difference between high pressure and low pressure....of CO2.**

**6.wt are the pollutants in the annex 6.**

**7.wt is ODS,WT ARE THEY?**

**8.difference between watertight and whether tight doors.....and where u test ..water tight doors...**

**9.block cofficient**

**10.pitch of the propeller.**

**11.wt is keelson propeller....and how do u fix the propeller to shaft.**

**12.wt is SMPEP**

**13.wt is EEDI AND EEOI**

**Result pass bro....coc**

**29/12/2021**

**Int :-manjhi sir**

**Ext:- anil bhat sir**

**MEP**

**Fabrication of pipe**

**Annealing**

**Normalizing**

**Hardening**

**Case hardening nitriding**

**Removal of ME exh vlv guide**

**Vernier calliper**

**Coc** 

**Special thanks to saheem bhai, abhishek, arun, shobit, omkar, ganesh sirs**

**Saheem bhai thanx** 

**29/12/2021**

**manjhi sir**

**anil bhat**

**difference bw tender and stiff ship**

**hyper mist and foam system lot of cross questions**

**margin plate , girder, intercostal girder**

**ballast water management plan and use on my ship**

**difference between D1 and D2**

**Solas chapters**

**Solas chapter 12 complete**

**result pass**

**29/12**

**manjhi sir**

**anil bhat**

**motor mep**

**main eng type**

**mc vs me**

**starting system interlocks**

**bottom end clearance**

**thrust block**

**sewage treatment checks**

**ac capacity control**

**how u order bolt, grinding wheel**

**boiler type**

**vit n super vit**

**Anil Bhatt sir**

**And 2 more surveyor**

**Mrol**

**Lube oil test**

**Tig vs mig**

**Cast iron welding**

**Work permit**

**Annealing and normalizing**

**Ndt and types**

**Explain dye penetration**

**Icing on suction side reason**

**Critical temp of cast iron ?mean**

**Critical temp of steel ?value**

**Pass 🙏 coc**

**Anil Bhatt sir**

**Manjhi Sir**

**Function 4B**

**Crankshaft deflection**

**Indicator Diagrams**

**Fuel pump (Sulzer)**

**Nitriding**

**Hardening**

**Annealing**

**NPSH**

**Function 6**

**How to find tube leak in heat exchanger**

**How to plug**

**Ballast pump casing crack?**

**How to remove broken bolt?**

**Pipe fabrication?**

**How to make jig?**

**How to make bends in pipe?**

**Fuel valve overhaul?**

**Both pass **

**Thanks to Samant Sir**

**Thanks to HATC family**

**Thanks to Akshay Negi**

**Thanks to Vrashank**

**Thanks to Sidhant**

**Thanks to Sabrit**

**Thanks to Abhijit Bera Sir**

**Thanks to Saheem Bhai**

**For all of your support and time.**

**Ext: Anil bhatt**

**Int: Majhi**

**1. How will you order grinding wheel?**

**2. How will you order bolt?**

**3. How to check main engine piston material removal on crown( using template)**

**4. How to check main engine fuel pump timing**

**5. How to do piston pressure testing?**

**6. Air removal from Refer system**

**7. Moisture removal from Refer system**

**Result coc **

**External - Anil Bhatt**

**Internal - Majhi**

**Electrical**

**Induction motors , types**

**Squirel cage IM**

**Slip ring IM**

**Where these r used**

**Advantages of Squirel cage over slip ring**

**Thermister**

**Thermostat**

**Thyrister**

**SCR**

**Dead front panel**

**Commutators and Slip rings**

**Contactors and Relay**

**Steering gear motor features**

**Mep**

**Fuel pump timing**

**How will u check**

**Pipe fabrication**

**Oxygen and acetylene bottle safeties**

**Stern tube LO leaking immediate actions**

**and some more**

**Result - pass**

**COC**

**Thanks Jacob Sir for making the basics clear**