

COMMON ELECTRICAL EQUIPMENT SPECIFIC CHECK BY CTT(PBR)

<u>Ser</u>	<u>Checks to be undertaken</u>	<u>Sat</u>	<u>Unsat</u>	<u>Observation</u>	<u>Remarks</u>
1.	Pre-OST Check Off list checking adherence of ship to various policies w.r.t Electrical Equipment/ Hygiene has been worked out and appended in succeeding paragraphs for checks.				
2.	<u>Whether policies on the following are being implemented</u>				
	2.1 Usage of double pole 230V, 5/15 Amp switch sockets.	Sat			
	Ref. IHQ MoD(N) letter EE/03/9711 dated 02 Feb 17.				
	2.2 Use of Laundry iron boxes.		Unsat		Iron box used in JS mess
	2.3 Use of lead lamps.		Unsat		Not available.
	2.4 Modification of 230V domestic supply scheme to 3 Phase 4 wire system and double pole MCBs.		Unsat		Not implemented.
	Ref. IHQ MoD(N) letter EE/03/9721 dated 05 Jan 11.				
	2.5 Availability of HV insulated synthetic rubber mats.	Sat			
	Ref. IHQ MoD(N) letter EE/03/9721 dated 30 DEC 21.				
	2.6 Conduct Power quality audit.		Unsat		Audit report not available.
	Ref. IHQ MoD(N) letter EE/POLICY/L-03/POWER-17 dated 22 Apr 10.				
	2.7 Fitment of COTS LED lights.	Sat (with obs)			LED lights not available in various places
	Ref. No 36/15 and IHQ MoD(N) letter EE/POLICY/9711(LED)/L-98 dated 18 Mar 15.				
	2.8 Shielding integrity of CAT 'A'.	Sat			
	Ref. NO (STR) 05/15.				
	2.9 Removal of metallic wire mesh/ant other material from electrical cables.	Sat			
	Ref. IHQ MoD(N) Fax EE/03/9721 Dated 17 Feb 17.				
	2.10 Pipelines are not passing through switchboard compartments.	Sat			
	Ref. Article 0707 OF NES 502.				

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	2.11 Conduct of Electrical Safety Audit.	Sat			10 Nov 22 (SS)
	2.12 Conduct of Galley Safety Audit.	Sat			02 Sep 22 (SS)
	Ref. NO 27/06.				
	2.13 Light Switches are installed outside the battery compartment.	No Battery Compartment on the ship			
	2.14 Conduct of Portable Equipment Audit.	Sat			10 Nov 22 (SS)
	Ref. No 02/16.				
	2.15 Lighting in magazine compartments.	Sat			
	Ref. IHQ MoD(N) / DEE letter EE/03/9712/safety Audit dated 27 Nov 18.				
	2.16 Whether modifications in power supply layout are recorded in the schedule of cables and schematic layout board in distribution boxes.	Sat			
3.	Ref. IHQ MoD(N) letter EE/03/9711/POWER/POLICY dated 11 May 15.				
	Whether following safety templates are available onboard.				
	3.1 Operation of main switchboard.	Sat			
	3.2 Handling fire in main switchboards.	Sat			
	3.3 Handling low insulation in switchboards.	Sat			
	3.4 Handling partial and total power failure.	Sat			
	3.5 Switchboard watch keeping.	Sat			
	3.6 Laying of emergency cable.	Sat			
	3.7 Operation of Energised/ Live electrical equipment.	Sat			
	3.8 Safety measures during monsoon.	Sat			
	3.9 Rounds of Electrical compartments.	Sat			
	3.10 Pre/ Post sailing checks	Sat			
	3.11 Electrical emergencies during entering and leaving.	Sat			
	3.12 Connecting and disconnecting shore supply.	Sat			
	3.13 First aid case of Electrical shock.	Sat			
	3.14 Securing of sea.	Sat			
	3.15 Gyro emergency.	Sat			
	3.16 Handling/ Charging batteries.	Sat			
	3.17 Operation of motor and converters.	Sat			
	3.18 Maintenance of Antenna and Waveguides.	Sat			

<u>Ser</u>	<u>Checks to be undertaken</u>	<u>Sat</u>	<u>Unsat</u>	<u>Observation</u>	<u>Remarks</u>
	3.19 Working with HT supplies	Sat			
	3.20 Dry Docking	Sat			
	3.21 Water ingress in Electrical equipment.	Sat			
	3.22 Precaution in extreme weather conditions	Sat			
	3.23 Working aloft.	Sat			
	3.24 Testing and maintenance of portable equipment.	Sat			
	3.25 Action during RAS/ Maneuvers.	Sat			
	3.26 Working with power tools	Sat			
	3.27 Precaution for ammunitioning and de- ammunitioning.	Sat			
	3.28 Darken ship.	Sat			
	3.29 Undocking checks	Sat			
4.	<u>Whether following books and records are available and being maintained.</u>				
	4.1 Log and progress book		Unsat		Not available.
	4.2 Switch board log book	Sat			
	4.3 Gyro log book (as applicable)	Sat			
	4.4 Weapon stabilizer Log book.		Unsat		Not available.
	4.5 Defect book as (IN -455).	Sat			
	4.6 Battery Log book (IN -384).	Sat			Maintained as one book.
	4.7 Battery Log Book (Maintenance free).	Sat			
	4.8 Electrical Training Book.	Sat			
	4.9 SPM Log Book(ERMR)	Sat			
	4.10 Antenna insulation Book.	Sat			
	4.11 CRETE Book.	Sat			
	4.12 Electrical Survey and demand Book.	Sat			
	4.13 PTS register.	Sat			
	4.14 Ty loan Book (internal).	Sat			
	4.15 Ty loan Book (external).	Sat			
	4.16 Cable Register.	Sat			
	4.17 EMI/EMC Log Book.		Unsat		Not available.
	4.18 DOP Register.		Unsat		Not available.

Ser	<u>Checks to be undertaken</u>	<u>Sat</u>	<u>Unsat</u>	<u>Observation</u>	<u>Remarks</u>
	4.19 OPDEF /CNADEF/STOREDEM/OPDEM/CANDEM Register.	Sat			
	4.20 EMAPS	Sat			
	4.21 Electrical PLL (form S 1099)	Sat			
	4.22 Divisional record book.	Sat			
	4.23 Sailing order book (IN – 499)	Sat			
	4.24 Equipment logs/ Miscellaneous records.		Unsat		Not available.
	4.25 Record of handling over/ taking over of Electrical officer.	Sat			
	4.26 Electrical standing orders.	Sat			
	4.27 Watch and quarter bill.	Sat			
	4.28 Maintenance schedule.		Unsat		Not available.
	4.29 D 787/ SPTA lists (OBS, B&D, LTE)/ CA 511/Warrant of stores.		Unsat		Not available.
	4.30 E DART.	Sat			
	4.31 Policy file (Technical).	Sat			
	4.32 Policy file (General).	Sat			
	4.33 Check off lists.	Sat			
	4.34 SFD/ Electrical maintenance schedule.		Unsat		Not available.
	4.35 Defect Acquaints.		Unsat		Not available.
	4.36 Record of Navy orders.		Unsat		Not available.
	4.37 GRAQ/ ship system specifications (Part IV/ DATs reports.		Unsat		Not available.
	4.38 Allowance lists (CRETE).	Sat			
	4.39 HATs/ SATs reports/ Test certificates.	Sat			
	4.40 Documentation list		Unsat		Not available.
	4.41 d 787 'G'/As Made & As fitted drawings list.	Sat			
5.	<u>Calibration/ Load test.</u>				
	5.1 Whether all CRETE are calibrated every 24 months.		Unsat		CRETE not held
	5.2 Whether all meters of Switchboards, Main breakers are calibrated.	Sat			25 Jul 22.
	5.3 Whether all meters of Rectifiers of Battery Rectifier are calibrated.	Sat			
	5.4 Whether anchor windlass and capstan starter has been calibrated and tested.	Sat			28 Jun 22.
	5.5 Whether ventilation starters have been calibrated and tested.		Unsat		MPR not calibrated.

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	5.6 Whether all load tested, certificate is available for generators and all parameters are within laid down limits and critical issues highlighted in trial reports/ certificates are liquidated.	Sat			
	5.7 Whether load test certificate of Helo Starting system is available.	NA			
	Ref. Para 13, section III of Annexure I to NO (Str) 13/2009.				
	5.8 Whether Log is calibrated.	Sat			HAT - 08 Aug 22. SAT - Not calibrated
MATERIAL CHECKS					
6.	Harbour.				
	6.1 Compartment checks (General).	Sat			
	6.2 Whether the compartment is free from following warning signs.				
	6.2.1 Smoke, sparks, arcing, or unusual sound from electrical motors or contractors.	Sat			
	6.3 Frayed and damaged cords or plugs.	Sat			
	6.4 Frequent tripping of breakers.	Sat			
	6.5 Unusually hot electric motors, transformers and other electrical equipment.	Sat			
7.	Common Measures during Monsoon.				
	7.1 Whether all motors, control gears, indicators and repeaters fitted on weather deck are covered with weatherproof canvas/ suitable covers.	Sat			
	7.2 Whether all panel covers/ cable glands and antennae glands on weather deck are leak free.	Sat			
8.	Common Checks.				
	8.1 Whether rubber mats are available near electrical equipment.	Sat			
	8.2 Whether all cable glands are seated.	Sat			
	8.3 Whether portable CO2/ AFFF extinguisher is available.	Sat			
	8.4 Whether emergency escape arrangement is available (ELSA).	Sat			
	8.5 Whether AELs are available and serviceable.	Sat			
	8.6 Whether water tight integrity of electrical equipment is maintained.	Sat			
9.	Electrical Safety.				
	9.1 Whether all meters/ instrumentation are calibrated.	Sat			
	9.2 Whether 'Danger High Voltage' and 'Do Not Switch On' tallies/ boards	Sat			

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	are available.				
	9.3 Whether all bulbs, lights and switches are operational.	Sat			
	9.4 Whether test bench is insulated.	NA			
	9.5 Whether sparks proof safety goggles are available.	Sat			
	9.6 Whether area is secured.	Sat			
	9.7 Rubber mats are placed in front of work bench.	NA			
10.	<u>Switchboards and Generators.</u>				
	10.1 Whether all electrical equipment and starter/ control panels are earthed.	Sat			
	10.2 Whether wires/ straps are tightly fitted and terminals are not painted.	Sat			
	10.3 Whether proper plugs and lugs are used for connecting power supply.	Sat			
	10.4 Verify that fuses, breakers and relays in distribution boxes and control circuits are not bypassed.	Sat			
	10.5 Whether any loose wire and bare live conductors/ terminals are observed including on battery charging terminals and portable emergency fuse boards.	Sat			
	10.6 Whether proper cover/ cap for all connectors on weather deck are available.		Unsat		Not available in certain locations
	10.7 Whether shades for all light fittings and lead lamps are intact.		Unsat		Lead lamps not available.
	10.8 Whether domestic power supply transformers and distribution boards are loaded as per their capacity.	Sat			
	10.9 Whether all UPS/ batteries are secured property and battery terminals are protected with insulated caps/ covers.		Unsat		Terminal caps missing in all batteries.
	10.10 Whether all power supply sockets on weather deck are water tight.	Sat			
	10.11 Whether earth pin is grounded in all power supply sockets.	Sat			
	10.12 Whether all sections of switchboard are earthed.	Sat			
	10.13 Whether insulation is within limits.		Unsat		SWBD Insulation meter non-ops.
	10.14 Whether Electrical/ Machinery intercom is operational.		Unsat		Non-ops
	10.15 Whether all safety cutouts/ protection units/ preferential trip systems/ alarms are operational.	Sat			

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	10.16 Whether all generators are load tested and all parameters are within laid down limits and critical issues highlighted in trial reports/ certificates are liquidated.	Sat			
	10.17 Whether the compartment is free from water/ fuel/ oil leakages and condensation.	Sat			
	10.18 Whether the following personal protective equipment (PPE) are available with Electrical Repair Teams				
	10.18.1 Rubber gloves.	Sat			
	10.18.2 Insulated tools.	Sat			
	10.18.3 Spark proof safety goggles.	Sat			
	10.18.4 Helmets with head torch	Sat			
	10.19 Whether the switchboard and shore supply breakers are free from combustible materials like fuel and hydraulic oil.	Sat			
	10.20 Whether there are any Outlet of ventilation trunks installed directly above switchboard.	Sat			
	10.21 Whether any pipelines are passing through switchboard.	Sat			
	10.22 Whether switchboard layout diagram available.	Sat			
	10.23 Whether watch keeper hand out board available.		Unsat		
11.	<u>Helo Starting System/ Aviation Facilities.</u>				
	11.1 Is the HSR load tested to 1200 A or to the rated current?	NA			
	11.2 Has the ship undertaken case for upgradation of the HSR in case of class B/C/D rectifiers i.a.w. extort policies?				
	11.3 Is the condition of the DC cables and the NATO adapter satisfactory?				
	11.4 Has the output been checked at the rectifier gauge/ cable end / with rectifier on load?				
	11.5 Is the HSC load trials undertaken?				
	11.6 Is the condition of the AC cables and the NATO adapter satisfactory?				
	11.7 Is the condition of the Connection boxes outside the hanger satisfactory?				
	11.8 Are all meters/ instrumentation/ protection devices of the HSC calibrated?				
	11.9 Are all meters/ instrumentation/ protection devices of the HSR calibrated?				

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	11.10 Are all helo deck periphery light operational and have sufficient brilliance?				
	11.11 Is the helo deck periphery light dimmer operational?				
	11.12 Is the GPI calibrated and is the calibration certificate held onboard?				
	11.13 Is the GSHB operational?				
	11.14 Are all helo hangar lights operational?				
	11.15 Whether hanger lights, deck lights, Stop/Go lights, GPI and Dimmer facilities are operational. Ref. Para 5, section III of Annexure I to NO (Str) 13/2009.				
12.	<u>UPS.</u>				
	12.1 Are the following equipment to be fitted with Ups i.a.w. IHQ MoD (N) letter EE/03 97/11/Policy/L-05 dated 24 Jan 17?				
	12.1.1 Nav Lights	Sat			
	12.1.2 Telephone exchange	Sat			
13.	<u>Battery Compartment.</u>				
	13.1 Whether all batteries are arranged neatly and secured for sea.	Sat			
	13.2 Whether fresh water supply, wash basin and drainage facility are available.	No Battery Compartment on the ship. Batteries stored in following locations:- (a) FER – 08 (b) AER – 04 (c) EDA - 05			
	13.3 Whether light switches are installed outside the compartment.				
	13.4 Whether the compartment is free from water or acid spillage.				
	13.5 Whether the compartment is free from combustible materials such as fuel and hydraulic oil.				
	13.6 Whether the following personal protection equipment are available.				
	13.6.1 Gum boots rubber.	Sat			
	13.6.2 Gloves rubber.	Sat			
	13.6.3 Goggles complete with clear windows.	Sat			
14.	<u>Galley.</u>				
	14.1 Whether galley safety indication lamps are available outside galley and in DCHQ.	Sat			
	14.2 Whether single isolating switch for all galley equipment other than refrigeration units is fitted adjacent to the main entrance door of galley.	Sat			
	14.3 Whether locking arrangement for main isolating switch is available.	Sat			
	14.4 Whether ventilation starting mechanism is available within 1.8 to 3 m	Sat			

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	of deep fat fryer.				
	14.5 Whether instructions in English and Hindi on first aid for electric shock, affixed in a conspicuous place.		Unsat		Not available.
	14.6 Whether insulation of equipment cables is within limit.	Sat			
	14.7 Whether all power supply cables are running along the installed channel plates and conduits.		Unsat		Cables found outside conduits
15.	<u>HF/ Antennae Post.</u>				
	15.1 Whether high voltage marking of transmitter and radio hazard markings/ boards are available.	Sat			
	Ref. Article 0705 of BR 2000 (20).				
16.	<u>Steering Post.</u>				
	16.1 Whether AELs are fitted in the compartment.	Sat			
	16.2 Whether rubber mats are placed in front of electrical equipment.		Unsat		Not held.
17.	<u>Equipment Rooms/ Converter Room.</u>				
	17.1 Check whether the following in equipment rooms such as Gyro, Steering gear, Radars etc. are available.	Sat			
	17.2 Whether ACOS/UYPs and fault alarms for critical equipment such as gyro, steering gear, navigational lights, etc. are operational.	Sat			
	17.3 Whether all safety cut offs are operational.	Sat			
	17.4 Whether rubber mats are placed in front of equipment.		Unsat		Not held.
	17.5 Whether HP pneumatic systems and HP air bottles are pressure tested.	NA			
	17.6 Whether hydraulic systems such as accumulator, pressure gauge, valve, pipe lines are pressure tested.				
18.	<u>Magazine (Specific Compartment).</u>				
	18.1 Whether lighting switches are fitted outside the compartment.	Sat			
	18.2 Whether only burst proof glass lamp fittings are fitted.	Sat			
	18.3 Whether only necessary continuo scales pass through the magazine and no junction boxes are installed in the past.	Sat			
	18.4 Whether all electrical cables are running as high as possible.	Sat			
	18.5 Whether any naked lights are used.	Sat			
	18.6 Whether any waveguides are running through the magazine.	Sat			
	18.7 Whether light fittings are divided into two different groups, each fed	NA			

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	from a different source of supply.				
19.	<u>Sound Power Telephone.</u>				
	19.1 Whether all sound powered telephone are operational.	Sat			
	19.2 Whether SPT is available from bridge to conning positions, all steering posts, AIO compartment (Command Post and Ops Room), MCR and DCHQ.	Sat			
20.	<u>Galley Equipment.</u>				
	20.1 Whether all galley equipment are maintained.		Unsat		Poor electrical hygiene.
	20.2 Whether protective guards for all rotating parts of labour saving equipment, viz, meat cutting machines, mixers atta kneading machines etc. is fitted.		Unsat		Atta kneading machine not fitted permanently.
	20.3 Whether all galley equipment is earthed.		Unsat		Earthing strap not available i.r.o Atta kneading machine, galley range and two fridges.
	20.4 Whether safety cut-out thermostat for deep fat fryer is operational.		Unsat		Not held.
21.	<u>Split ACs.</u>				
	21.1 Whether double pole switches are used as On/Off switches.	NA			
	21.2 Whether Moulded Circuit Breakers (MCB) are used for split ACs as far as feasible.				
	21.3 Whether screened and single length cables are used.				
	21.4 Whether cable ends and switches free from carbonization/ deformation.				
	21.5 Whether all wires are laid down with proper channel plate and secured with clips/ cables tie.				
	21.6 Whether any extra/ unwanted wires are coiled and kept near the AC panel.				
22.	<u>Portable Electrical Equipment.</u>				
	22.1 Whether all portable electrical equipment including iron boxes in laundries are earthed with maximum earth resistance of 0.35 ohms (supplied directly and 0.50 ohms (supplied through an extension lead).	Sat			No laundry compartment onboard
	22.2 Whether quarterly checks of portable electrical equipment are being	Sat			10 Sep 22(SS)

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	conducted.				
	22.3 Whether any temporary power supplies are utilised for prolonged durations.	Sat			
	22.4 Whether three pin sockets are used for portable domestic appliances.	Sat			
	22.5 Whether power cables are of single length.	Sat			
23.	<u>ICCP System.</u>				
	23.1 Whether maintenance of the system is being undertaken as per MAINTOPS.	Sat			
	23.2 Whether condition of the cables and conduits is intact.	Sat			
	23.3 Whether hull potential values are within safe range.	Sat			
	23.4 Whether hull potential is measured using an external zinc reference electrode once every fortnight.	Sat			
	23.5 Whether pre-set hull potential is set on the auto control unit.	Sat			
24.	<u>DAT Recorder.</u>				
	24.1 Whether conning and machinery intercoms are interfaced with DAT recorder.	Sat			
	24.2 Whether DAT/ voice recorder log is being maintained.	Sat			
25.	<u>MDA.</u>				
	25.1 Whether interfacing of GPS, CTD, COTs radars, AIS, Sonar, Anemometer, Echo sounder, gyro and log with Trigun is available.	Sat			
	25.2 Whether MDA node/ slave display is available.	Sat			
26.	<u>AIS.</u>				
	26.1 Whether AIS is available.	Sat			
	26.2 Whether AIS is interfaced with GPS/DGPS, MDA, NAV Radar, ECDIS, Gyro, Log, Integrated Bridge system (if fitted), CTD/CAAIO, LINK II.	Sat			
	26.3 Whether 24V DC backup is available for AIS.	Sat			
27.	<u>ECDIS.</u>				
	27.1 Whether GPS, AIS and Radar are Interfaced with ECDIS.	Sat			
	27.2 Whether base version and latest correction of ENCs, paper charts and navigation publications are available.	Sat			
28.	<u>Gyro/ Magnetic Compass.</u>				

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	28.1 Whether lubber line alignment of gyro repeaters has been carried out.	Sat			
	28.2 Whether gyro failure alarm is available in bridge.	Sat			
	28.3 Whether swing check of magnetic compass has been carried out and deviation card is available.	Sat			
29.	<u>Steering Gear.</u>				
	29.1 Whether following audio and visual failure alarms are available in bridge.				
	29.1.1 Hydraulic failure.	Sat			
	29.1.2 Control failure.	Sat			
	29.1.3 Total power failure.	Sat			
	29.2 Whether ACOS for steering gear supply is available.	Sat			Battery backup available.
	29.3 SPM checks and health of steering gear.	Sat			
	29.4 Operational status of all available modes of operation as per system design from various steering locations onboard.	Sat			
30.	<u>Anchor Windlass and Capstan.</u>				
	30.1 Whether MAINTOP routines are being carried out.	Sat			
	30.2 Whether current and SPM parameters are within prescribed limits.	Sat			
	30.3 Whether all insulation parameters are within limits.	Sat			
	30.4 Whether earthing straps are intact.	Sat			
	30.5 Whether electromagnetic brakes are operational.	Sat			
	30.6 Whether motors/ starters are covered with waterproof covers.	Sat			
31.	<u>General and Engine Room Ventilation.</u>				
	31.1 Whether MAINTOP routines are being carried out.	Sat			
	31.2 Whether current and SPM parameters are within prescribed limits.	Sat			SPM parameters not available for trunking. motor
	31.3 Whether all insulation parameters are within limits.	Sat			
32.	<u>Laundry.</u>				
	32.1 Use of iron box	Laundry compartment not available. Iron box used in JS mess and washing machine used in JS washroom lobby.			
	32.2 Whether visual warning indication is available for iron box switched On/ Off at DCHQ/ Outside laundry.				

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	32.3 Whether iron box is being used with good quality three core flexible cable, and is earthed.				
	Ref. NO 53/02 and FOST SAQ/L-01/14.				
	32.4 Whether standard marine grade plugs/ sockets are being used.				
	32.5 No extension board/ cord is being used.				
	32.6 The electrical cord is arranged/ laid out in a manner, so that it cannot be pulled or tripped over.				
	32.7 No other high- wattage appliance is being used on the same circuit to avoid an overload.				
	32.8 The stowage holder for the iron box is sited in a suitable position away from the electrical socket iaw Def. Stan 02-123 Part 1 issue 2.				
	32.9 Adequate lighting, ventilation and drainage are available.				
	32.10 Protective rubber mats are available near ironing table/ board.				
33.	<u>Window Wipers.</u>				
	33.1 Whether all window wipers are operational.	Sat (with obs)			01 Non-ops.
34.	<u>Electric Siren.</u>				
	34.1 Is the siren operational from all location as per design?	Sat			Air siren
	34.2 Is the system available in auto model?	Sat			
	34.3 Are all components grounded?	Sat			
35.	<u>NLCP.</u>				
	Ref. NLCP EED-Q-262.				
	35.1 Are all navigational lights checked during sea and action?	Sat			Following NAV lights non-ops. (i) NUC (AC) (ii) Towing mast (AC & DC) (iii) Mast headlight (DC)
	35.2 Are all navigational lights operational?	Sat (with obs)			
	35.3 Are there individual toggle switches for each navigation light with, LEDs adjacent to the corresponding light control switch iaw ED-Q-262?	Sat			

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	35.4 Is a MIMIC panel available in OPS room?		Unsat		Not available.
	35.5 Is LED test facility operational?		Unsat		Not available.
	35.6 Is alarm and its reset facility available in NLCP iaw EED-Q-262?		Unsat		Not available.
	35.7 Is dimmer available in NLCP iaw EED-Q-262?		Unsat		Not available.
	35.8 Does the NLCP have operational backup supply?	Sat			
	35.9 Are all 24 V emergency lights operational?		Unsat		Following NAV lights non-ops. (i) Towing mast (ii) Mast headlight
	35.10 Are weather proof sockets available for connection of stern light/ anchor light etc?	Sat			
36.	<u>Boat Davit.</u>				
	36.1 Whether maintenance is being undertaken as per MAINTOPS.	Sat			
	36.2 Whether limit switches for upper hoisting limit and slewing movement are operational.	Sat			
37.	<u>Man Trap Alarm.</u>				
	37.1 Whether Mantrap alarm for cold room and cool room is available in DCHQ, Ship galley and Officer galley.	NA			
	37.2 Whether battery backup for alarm is available.				
38.	<u>ACOS.</u>				
	38.1 Are both normal and alternate supply available for all ACOS?	Sat			
	38.2 Are all the ACOS operational?	Sat			
	38.3 Does the supply change over occur without tripping the downstream equipment?	Sat			
	38.4 Are all indications operational?	Sat (with obs)			01 alternative supply indication of radar ACOS found unsat.
39.	<u>Emergency Supply.</u>				
	39.1 Are all emergency cables as per the ships drawing available on board?	NA			
	39.2 Are shrouded plugs/ springs/ cylindrical sleeve of moulded insulation material/ flexible corrugated rubber sheath available for all cables?				
	39.3 Have the earth connection cables been provided with hook-end				

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	terminals for securing.				
	39.4 Are all bulkhead earth connection terminals provided with securing under wing nuts.				
	39.5 Are all cables marked with an identification number and with a brief indication of its purpose?				
	39.6 Are all bulkhead cable stowage marked with an identification number?				
	39.7 Are all emergency changeover switches of DBs/Fuse panels operational?				
	39.8 Are T handles available at all ECBs/ DBs/ FPs and service points?				
	39.9 Are all portable transformers as per SFD/ drawings available?				
	39.10 Availability of portable emergency link boxes as per SFD/ drawings.				
	39.11 Is the insulation of the fixed emergency run greater than 2 Mohm?				
40.	<u>Fuse Panel.</u>				
	40.1 Are all cable tallies in place?	NA			
	40.2 Are all fuse panels cleaned with dry air?				
	40.3 Is any damaged insulation of cables (if any replaced)?				
	40.4 Are there any fuses replaced using fuse wire?				
	40.5 Are there any missing fuses?				
41.	<u>Trans rectifiers.</u>				
	41.1 Are all contact and connections clean?	Sat			
	41.2 Is rectifier failure unit tested on load, cut off power supply?		Unsat		Not carried out.
	41.3 Are load trials carried out at the rated value?		Unsat		Not carried out.
	41.4 Is the battery bank automatically taking over in case of supply failure?	Sat			
	41.5 Are the battery being trickle charged when not in use?	Sat			
	41.6 Does the ship have a Transrectifier failure audio/ visual alarm in MCR/ switchboard.		Unsat		Not available.
	41.7 Is the insulation resistance greater than 1 M ohm?	Sat			
42.	<u>Wire Aerials.</u>				
	42.1 Are the wire ropes are free of kinds and frayed strands?	Sat			
	42.2 Are the bonding straps installed and intact?	Sat			

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	42.3 Is the antenna wire properly stressed?	Sat			
	42.4 Are the insulators free of grease, paint and salt?	Sat			
	42.5 Are the wire safety link installed and intact?	Sat			
	42.6 Are the insulators free of cracks?	Sat			
	42.7 Is the insulation/ resistance of antenna satisfactory?	Sat			
43.	<u>Whip Aerials.</u>				
	43.1 Are the insulators free from cracks and salt deposit?	Sat			
	43.2 Are the antenna base tuner bonded?	Sat			
	43.3 Is the antenna tuner pressurized?	Sat			
	43.4 Are the insulation checks of ABT satisfactory?	Sat			
	43.5 Are the insulation/ resistance checks of antennas satisfactory?	Sat			
44.	<u>HK 014/ M7 Antennas.</u>				
	44.1 Is the condition of RF paint on the antennas satisfactory?	Sat			
	44.2 Are the insulation/ resistance checks of antennas satisfactory?	Sat			
45.	<u>Main broadcast/ Intercom/ Interphone.</u>				
	45.1 Have the system trials been undertaken by ETMU?		Unsat		Not carried out.
	45.2 Does the main broadcast have priority setting for critical locations?		NA		
	45.3 Are all location provided with speakers of appropriate rating as per drawings?	Sat			
	45.4 Are all critical locations connected through both Con 1 and 2?		NA		
	45.5 Are location of all speakers and microphones as per the action manning?	Sat			
	45.6 Are all amplifier optimally loaded?	Sat			
	45.7 Are all speakers and associated components effectively grounded?		Unsat		Not grounded at certain places.
	45.8 Is the system backup satisfactory?	Sat			
	49.9 Have headsets been provided in machinery component?	Sat			
	49.10 Are flasher units installed in machinery compartment?	Sat			
46.	<u>Communication Sets.</u>				
	46.1 Are all communication sets as per the SFD operational?		Unsat		Inmart-C found non-ops
	46.2 Availability of OP checks reports of all communication equipment?		Unsat		Not available.

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	46.3 Have the VSWR measurements been undertaken for all communication sets?	Sat			
	46.4 Have the power output measurements been undertaken for all communication sets in various modes?	Sat			
	46.5 Are the RCU of the individual sets operational?	Sat			
	46.6 Are all communication sets free from any interference?	Sat			
	46.7 Is the ACOS feeding supply to the sets operational?		Unsat		UPS found non-ops.
	46.8 Have two communication sets below 2 KW been provided with backup supplies?		Unsat		UPSAfound non-ops.
47.	<u>NBC Monitoring.</u>				
	47.1 Are all sensors of the SIRS operational?	NA			
	47.2 Are all sensors of the SICADS operational?				
	47.3 Is the trial report of SIRS available?				
	47.4 Is the trial report for SICADS available?				
	47.5 Are the NBC monitoring equipment calibration report in date?				
	47.6 Are the operating procedure for SIRS and SICADS available near the equipment?				
	47.7 Are the nucleonic return being sent for the onboard sources?				
48.	<u>Telephone Exchange.</u>				
	48.1 Is the telephone exchange operational?	Sat			
	48.2 Is the list of phone numbers available at all locations?	Sat			
49.	<u>Degaussing.</u>				
	49.1 Is the system operational in both manual and auto mode?	NA			
	49.2 Are all external interfaces for the system available?				
	49.3 Is the electrical/ EMI hygiene of equipment and associated cabinets satisfactory?				
	49.4 Are the switching On/ Off procedure available?				
	49.5 Are the insulation values of the degaussing coils satisfactory?				
	49.6 Are the system setting as per last ranging trials report?				
	49.7 Are the insulation, SPM and starting / running current of MG sets satisfactory?				
	49.8 Are all panel meters calibrated?				

Ser	Checks to be undertaken	Sat	Unsat	Observation	Remarks
	49.9 is appropriate current being injected in the different coils?				
	49.10 Has the annual health audit of the system been undertaken iaw IHQ MoD(N) Letter WM/2855 dt 29 May 13?				
50.	<u>GSHB.</u>				
	50.1 Is the system operational?	NA			
	50.2 Is the bar illumination panel operational?				
	50.3 Is the bar illumination potentiometer operational?				
	50.4 Is switching ON/OFF procedure in the compartment available?				
	50.5 Has the functional check of system been undertaken with stimulator?				
	50.6 Are the last HAT/SAT/Ops Checks reports available?				
	50.7 Are the operation of push buttons and limit switches satisfactory?				
51.	<u>Miscellaneous PGD.</u>				
	51.1 Are Power quality checks being conducted by SS annually?		Unsat		Audit report not available.
	51.2 Has the annual power quality surveillance audit been conducted by ETMA/ETMU? (For ships applicable)		Unsat		Not offered
	51.3 Does the ship have a 3 Ph, 4 Wire 230 V distribution system for all domestic supplies?		Unsat		Not held.
	51.4 Are all 230V 6/16 Amp sockets compliant with IHQ MoD(N) letter EE/03/9711 Dated 02 Feb 17?	Sat			
	51.5 are the cable run/cable channel tray covered with wire meshes/any other material in contravention to IHQ MoD(N) letter EE/03/9711 dated 17 Feb 17?	Sat			
	51.6 Do the installed Led based luminaire to conform to EED-50-33 FOR design and technical requirement?	Sat			
	51.7 Are there sufficient number of 24 V lead lamps available iaw ETMA letter ETMA/318/103/EH dated 11 mar 15?		Unsat		.
	51.8 Are al portable equipment's which are fed by flexible cables being quarterly mustered iaw NO 02/16?	Sat			
	51.9 Are the following ETMU trial reports, iaw No 14/15, available:-				
	51.9.1 DAs.	NA			
	51.9.2 Helo starting rectifiers.				

<u>Ser</u>	<u>Checks to be undertaken</u>	<u>Sat</u>	<u>Unsat</u>	<u>Observation</u>	<u>Remarks</u>
	51.9.3 Helo starting convertors.				

<u>Ser</u>	<u>Checks</u>	<u>Yes/ No/NA</u>	<u>Observation</u>	<u>Remarks</u>
Radars including Cots Radars				
1.	Are radars operational?	Sat		
2.	Check availability of Rubber mats in HF post.	Sat		
3.	Is the ventilation of the compartment/ devices functional/ effective?	Sat		
4.	5. Are all electrical equipment/ devices earthed, and wires/ straps tightly fitted and terminals free from paint?	Sat		
6.	7. Is the system BITE checks, if available satisfactory?	Sat		05 Sep 22.
8.	9. Are all interfaces as per Technical; Manual interface document available?	Sat		Soft copy available.
10.	11. Are all cabinet doors tightly closed and interlocks maintained?	Sat		
12.	13. Have the six monthly parameter checks wherever applicable been undertaken?	Sat		05 Sep 22.
14.	15. Are the EMAP and defect book of the system updated?	Sat		
16.	17. Are all maintenance routines carried out as per MAINTOP and if not has FUSS been raised?	Sat		
18.	19. Has the tracking on simulated target using TCC been undertaken with follow up check of all mountings?	Sat		
20.	21. Are the azimuth and elevation locks operational?	Sat		
22.	23. Are the HAT/ SATs report available?	Sat		
24.	25. When was the last fine alignment checks of the sensors carried out?	Sat		05 Sep 22.
26.	27. Are the alignment checks with bore sight camera satisfactory?	Sat		
28.	29. Are the EMAP and defect book of the system updated?	Sat		
30.	31. Are all maintenance routines carried out as per MAINTOP and if not has FUSS been raised?	Sat		
32.	33. Is the Man Aloft Switch operation satisfactory?	NA		
34.	35. Is a combiner unit/interswitch fitted for Nav Radars to obviate blind arc iaw IHQ MoD(N) letter WP/0204 dated 18 Jan 11.	NA		
36.	Are all the sensors input (Log, GPS, Gyro, AIS) to the system correctly displayed?	Sat		
37.	Is the radar range calibration of the display undertaken?	Sat		05 Sep 22.

Ser	Checks	Yes/ No/NA	Observation	Remarks
Gyros and other Nav Aids(Echo Sounder, EM Log, Magnetic Compass, WSDI)				
38.	Is the system operational?	Sat		
39.	Is the system interfaced with LOG and GPS?	Sat		
40.	Are all meters are operational and calibrated?	Sat		
41.	Are the switching ON/ OFF procedure and SOPs available in the compartment?	Sat		
42.	Is the ACOS taking over supply without tripping of gyro?	Sat		
43.	Are all repeaters aligned with master compass/Compass retransmission error check undertaken?	Sat		
44.	Has the gyro been checked for emergency settling?	Sat		
45.	Has the auto change over operation from Gyro 1 to Gyro 2 at the DDU been checked?	Sat		Only 1 gyro available.
46.	Is the operation of Auto Change Over Switch from Normal to Alternate supply satisfactory?	Sat		
47.	Are all alarm checks/signaling operational in the gyro compartment and bridge?	Sat		
48.	Is the system backup supply arrangement satisfactory?	Sat		
49.	Are the last HAT/SAT/ Ops Checks reports available?	Sat		
50.	Is the compartment well ventilated?	Sat		
51.	Is the Auto Change Over switch for the steering motors operational?	Sat		
52.	Is the system operational in Auto Pilot Mode? If applicable.	Sat		
53.	Is the system operational from all designated posts?	Sat		
54.	Is the system available in both channels of operation?	Sat		
55.	Are the last HAT/SAT/ Ops Checks reports available?	Sat		
56.	Does the steering gear control system have a backup supply provision?	Sat		
57.	Are effective means of communication available between ASP and following locations?			
	Bridge	Sat		
	Bridge Wing	Sat		
	Bridge Top	Sat		
	Quarter Deck	Sat		
	MCR	Sat		
EM Log				
58.	Is the AC/ventilation of compartment satisfactory?	Sat		

Ser	Checks	Yes/ No/NA	Observation	Remarks
59.	Are the switching ON/ OFF procedure and SOPs available in the compartment?	Sat		
60.	Is the RTU operational?	Sat		
61.	Are all log repeaters operational?	Sat		
62.	Are all repeaters aligned with RTU?	Sat		
63.	Are the last HAT/SAT/ Ops Checks reports available?	Sat		SATs pending.
64.	Is the test mode of operation available?	Sat		
65.	Is the insulation of pick up head satisfactory?	Sat		
66.	Is the system provided with backup supplies?	Sat		
Echo Sounder				
67.	Is the ES Shallow depth warning alarm operational?	Sat		
68.	Are the ES Audio and visual alarm for minimum depth available?	Sat		
69.	Are the ES Lithium batteries in the memory module (If applicable) operational?	NA		
70.	Is the insulation of 33 Khz Transducer satisfactory?	Sat		
71.	Is the insulation of 210 Khz Transducer satisfactory?	NA		
72.	Is the system provided with backup supplies?	Sat		
73.	Are the measurement of depth and it's correctness as per charts?	Sat		
74.	Is the Recorder unit operational?	Sat		
Wind Speed and Direction				
75.	Has the system been calibrated?	Sat		23 Mar 19.
76.	Are all WSDI interfaces as per the technical manual available?	Sat		
77.	Are all WSDI repeaters operational?	Sat		
Basic checks of SR/MR Guns				
78.	Is the system operational?	Unsat		Non-ops.
79.	Are the switching ON/ OFF procedure available?	Sat		
80.	Are the ACOS (if installed) operational?	Sat		
81.	Are all the devices grounded?	Sat		
82.	Are all indication lamps are operational?	Sat		
83.	Are all pressure gauges and meters calibrated?	NA		
84.	Is there any leakage in components of the hydraulic system?	NA		
85.	Is loading/ feeding mechanism operational?	Sat		
86.	Is the operation of Gun in elevation and training in manual mode satisfactory	Sat		
87.	Is the Cooling system and pneumatic system operational?	Sat		

Ser	Checks	Yes/ No/NA	Observation	Remarks
88.	When were the last Gun Alignment checks undertaken?	Sat		SR-22.
89.	When was the last Static and Dynamic checks undertaken?	Sat		
90.	Are the last HATs/SATs report available with the ship?	Sat		
91.	When was the last series inspection carried out?	Sat		
92.	Is the ship in possession of bore sight camera and binoculars as per authorised holdings?	Sat		
93.	Have all routines as per MAINTOPS been undertaken?	Sat		
94.	Are the operational state of mechanical interlocks and protection devices of system/ equipment, as applicable, satisfactory?	Sat		
95.	Are the insulation of motors, converters and power circuits within the limits (more than 1 Mohm)?	Sat		
96.	Are all the gun inter-locks working satisfactory?	Sat		
97.	Is the test report of hydraulic oil held with the ship?	Sat		
98.	Is the ship in possession of approve Polar diagram?	Sat		
99.	Are the Pre and Post firing checks being undertaken?	Sat		
100.	Have all routines as per MAINTOPS been undertaken?	Sat		
Basic checks of EON 51,SOP & OSS/ other Optical Tracking System				
101.	Is the system operational?	Sat		
102.	Are the switching ON/ OFF procedure available?	Sat		
103.	Are the ACOS (if installed) operational?	Sat		
104.	Are all the devices grounded?	Sat		
105.	Are all indication lamps are operational?	Sat		
106.	Are all system parameters within specified limits as per Technical Manual?	Sat		
107.	Is the LRF is operational and are LRF ranges available?	Unsat		
108.	Is the thermal camera operational?	Sat		
109.	Is the unit clear of all obstructions across the complete range of firing arc?	Sat		
110.	Is the gyro feed available for stabilization?	Sat		
111.	When was the last alignment checks undertaken?	Sat		SATs pending.
Basic checks of Chaff Launcher				
112.	Is the system operational?	NA		
113.	Are the switching ON/ OFF procedure available?			
114.	Are the ACOS (if installed) operational?			
115.	Are all the devices grounded?			

Ser	Checks	Yes/ No/NA	Observation	Remarks
116.	Are all indication lamps are operational?			
117.	Are all system parameters within specified limits as per technical manual?			
118.	Are the launchers clear of all obstructions?			
119.	Are the state of mechanical interlocks and protection devices of system operational?			
Basic checks of Missile FCS.				
120.	Is the system operational?			NA
121.	Are the switching ON/ OFF procedure available?			
122.	Are the ACOS (if installed) operational?			
123.	Are all the devices grounded?			
124.	Are all indication lamps are operational?			
125.	Are indications including switches operational?			
Missile Launchers				
126.	Is the system operational?			NA
127.	Are the switching ON/ OFF procedure available?			
128.	Are the ACOS (if installed) operational?			
129.	Are all the devices grounded?			
130.	Are all indication lamps are operational?			
131.	Are all system parameters within specified limits as per Technical Manual?			
132.	Are the launchers clear of all obstructions?			
Test Equipment				
133.	Are all test equipment calibrated iaw NO 15/13?	Unsat		
134.	Is the ship in possession of all INCRETE iaw latest IHQ MoD (N) policy letter	Sat		
135.	Are all test equipment in operational state?	Unsat		Oscilloscope and clamp meter found non-ops.
Weapon SPTA Management				
136.	Is the store muster being undertaken every 18 months or on transfer of LO? (Obtain the certificate)	Sat		
137.	Is a record of total no of OBS/presently held on board/ Demand outstanding/ yet to surveyed / demanded held with the respective department?	Sat		
138.	Is the list of OBS being maintained by the ship as per D787?	Sat		
139.	Does the ship maintain critical spares and its status?	Unsat		Not maintained.

Ser	Checks	Yes/ No/NA	Observation	Remarks
140.	Has the ship undertaken D787 amendment for newly fitted equipment/ change in scaling of OBS?	Sat		
141.	Has the check list been placed inside each of the boxes?	Unsat		
142.	Has random check of SPTA for each section been carried out during sailing/reaction ex.	Unsat		
143.	Are the SPTA boxes labelled for easy identification?	Unsat		
144.	Are the stores properly secured for sea?	Sat		
145.	Are spares being stored in cardboard/ boxes of inflammable materials?	Unsat		
Documentation of Weapon & Sensors				
146.	Has the documentation muster been undertaken as per D787 lists?	Sat		
147.	Are MAINTOPS available for all equipment installed on board as per D787/ SFD?	Sat		
148.	Are all books/ formats being maintained as per FOST guidelines?	Unsat		
149.	Are all sections of EMAPs being filled as per existing instructions?	Sat		
150.	Is the key register being maintained by the department?	Sat		
151.	Are there any deficiency in documentation and has any action been initiated for the same?	Sat		
152.	Are the log books being signed by the concerned personnel regularly?	Sat		
153.	Is the department in possession of relevant Safety Check list for various evolutions as per FOST guidelines?	Sat		
154.	Has the LO's Ty Memo been issued for authorising personnel to undertake switchboard watch keeping?	Sat		
155.	Is the Departmental Standing orders as per guideline and in consonance with the Ships Standing Order?	Sat		
156.	Have all departmental personnel read and signed the Departmental Standing Orders?	Sat		
157.	Are the Sea and Action check list available with the department and in respective locations?	Sat		

EMI/ EMC CHECKS

Ser.	Checks to be undertaken	Observation	Remarks
1.	Is there uniform all round metal to metal contact between door and doorframe of CAT A compartments iaw NO Str 04/04?	Sat	
2.	Are doors on upper deck bonded at two locations ie. near both hinges?	Sat	
3.	Are all removable fittings on the upper deck are bonded?	Sat	
4.	Are fluorescent / CFL lighting being used in CAT 'A' compartments?	Sat	
5.	Are doors not made of metal covered with screening material in CAT 'A' compartment?	Sat	
6.	Are honeycomb filters provided on ventilation trunkings opening in a Cat 'A' compartment	Unsat	
7.	Are all shipboard equipment operating from an external electrical power source of 30 volts or more, including COTS equipment, provided with bonding?	NA	
8.	Is the resistance of all bonding straps used less than $C > 0.1 \text{ Ohm}$?	Sat	
9.	Are RADHAZ zones marked for all antennas?	Sat	
10.	Are the Part A/ Part B EMI/EMC survey report (as applicable) available?	Unsat	