

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

18 MAR 1943

Received at London Office

Date of writing Report... 5th Mar. 1943 When handed in at Local Office... 17 MAR 1943 Port of... Sunderland

No. in Survey held at... Sunderland Date, First Survey... 19th Nov. 1942 Last Survey... 9th Mar. 1943  
Reg. Book. (Number of Visits... 20...)

on the H.M. TRAWLER "GRUINARD"

Tons { Gross... 453  
Net... 146

Built at... Sunderland By whom built... John Brown &amp; Sons, Ltd. Yard No... 205 When built... 1943

Owners... The Admiralty Port belonging to...

Electrical Installation fitted by... The Sunderland Forge &amp; Eng. Co., Ltd. Contract No... 205 When fitted... 1943

Is vessel fitted for carrying Petroleum in bulk... No Is vessel equipped with D.F... No E.S.D... No Gy.C... No Sub.Sig... No

Installation is Admiralty approved plans Have plans been submitted and approved... No System of Distribution... Two wire insulated Voltage of supply for Lighting... 110

Heating... 110 Power... 110 Direct or Alternating Current, Lighting... No Power... No If Alternating Current state periodicity... Prime Movers,

has the governing been tested and found as per Rule when full load is suddenly thrown on and off... No Are turbine emergency governors fitted with a

trip switch as per Rule... No Generators, are they compound wound... No are they level compounded under working conditions... No

if not compound wound state distance between generators... and from switchboard... No Where more than one generator is fitted are they

arranged to run in parallel... No are shunt field regulators provided... No Is the compound winding connected to the negative or positive pole

negative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing... No Have certificates of

test for machines under 100 kw. been supplied... No and the results found as per rule... No Are the lubricating arrangements and the construction

of the generators as per rule... No Position of Generators... Engine room starboard side forward

on raised platform is the ventilation in way of generators satisfactory... No are they clear of inflammable material... No if situated

near unprotected combustible material state distance from same horizontally... and vertically... No are the generators protected from mechanical

injury and damage from water, steam and oil... No are the bedplates and frames earthed... No and the prime movers and generators in metallic

contact... No Switchboards, where are main switchboards placed... Engine room starboard side near

generating set.

are they in accessible positions, free from inflammable gases and acid fumes... No are they protected from mechanical injury and damage from water, steam

and oil... No if situated near unprotected combustible material state distance from same horizontally... and vertically... No what insulation

material is used for the panels... Admiralty pattern if of synthetic insulating material is it an Approved Type... No if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule... No Is the frame effectually earthed... No

Is the construction as per Rule... No including accessibility of parts... No absence of fuses on the back of the board... No individual fuses

to pilot and earth lamps, voltmeters, etc... No locking of screws and nuts... No labelling of apparatus and fuses... No fuses on the "dead"

side of switches... No Description of Main Switchgear for each generator and arrangement of equaliser switches... Double pole

knife switch and double pole fuse.

and for each outgoing circuit... Double pole knife switch and double pole fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... Instruments on main switchboard... One

ammeters... One voltmeters... synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection... Earth Testing, state means provided... E lamp connected to E through two fuses

Switches, Circuit Breakers and Fuses, are they as per Rule... No are the fuses an approved type... No are all fuses labelled as

per Rule... No If circuit breakers are provided for the generators, at what overload current did they open when tested... No are the reversed current

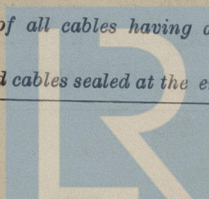
protection devices connected on the pole opposite to the equaliser connection... No have they been tested under working conditions, and at what current

did they operate... Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... No

Cables, are they insulated and protected as per the appropriate Tables of the Rules... Admiralty pattern if otherwise than as per Rule are they of an approved type... No

state maximum fall of pressure between bus bars and any point under maximum load... No are the ends of all cables having a sectional area of 0.01

square inch and above provided with soldering sockets... No Are paper insulated and varnished cambric insulated cables sealed at the ends... None fitted

Lloyd's Register  
Foundation

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PARTICULARS OF GENERATING PLANT.			
DESCRIPTION		RATED AT	WHERE DRIVEN BY AN INTERNAL

GENERATOR CABLES.								
DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area of No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	15	1	27/072	136	152	30	V.I.R.	L.C. A.R. 6187
" " EQUALISER ... ..								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR ... ..								
" " GENERATOR ... ..								

[illegible]

MOTOR CABLES.			
ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	
1-7½" Fan and 1-5" Fan fed from Forward Lighting Circuit			
1-5" Fan fed from Aft Lighting Circuit			
1-12½" Fan fed from Aft Lighting Circuit			
Particulars of Fan Motors			A.P.
7½" Fan 0.35 H.P. 4.6 Amps. Fudo 1/1004 L.C.			6196
5" Fan 0.18 H.P. 1.0 Amp Fudo 1/1044 L.C.			6196
12½" Fan 1.5 H.P. 13.1 Amps Fudo 3/1036 L.C.			6195



The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.

All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.

The foregoing is a correct description.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.

Electrical Engineers.

Date 8-3-1943

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass 51 feet

Minimum distance between electric generators or motors and steering compass 48 feet

The nearest cables to the compasses are as follows:—

A cable carrying 1/4 Ampères on the feet from standard compass 5 feet from steering compass.

A cable carrying 1/4 Ampères 5 feet from standard compass on the feet from steering compass.

A cable carrying Ampères feet from standard compass feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be Nil degrees on every course in the case of the standard compass, and Nil degrees on every course in the case of the steering compass.

JOHN CROWN & SONS, LTD.

Builder's Signature.

Date

Is this installation a duplicate of a previous case Yes

If so, state name of vessel "EARRAID"

Plans. Are approved plans forwarded herewith

If not, state date of approval Appd. by Admiralty

Certificates. Are certificates of test for ~~motors engaged on essential services~~ and generators forwarded herewith Yes

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.) The electrical

equipment of this vessel has been installed under special survey in accordance with the Admiralty plans and amendments thereto and with appropriate Admiralty Blue Plans. The materials used are of good quality and the workmanship is good. On completion the equipment was run under working conditions with satisfactory results and the insulation resistance of all circuits was maintained at a high level. This equipment is in my opinion suitable for a classed vessel.

Noted

Rel

22.3.43

Total Capacity of Generators 15 Kilowatts.

The amount of Fee ... £ 15 : - : When applied for, 1.3.MAR.1943

Travelling Expenses (if any) £ : : When received, 19.....

Saninson

Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 23 MAR 1943

Assigned

See Id. 25 33639



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