

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

9 AUG 1943

Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office.....AUG 1943.....19..... Port of.....HULL.....

No. in Survey held at.....Selby & Hull..... Date, First Survey.....24. 5. 43..... Last Survey.....26. 6. 19 43.....  
Reg. Book. (Number of Visits.....16.....)

on the.....Single screw steam tug ANTIC..... Tons {Gross.....597.....  
Net.....

Built at.....Selby..... By whom built.....Lockram & Son Ltd..... Yard No.....1264..... When built.....1943.....

Owners.....Ministry of War Transport..... Port belonging to.....

Electrical Installation fitted by.....William Broadley & Sons Ltd..... Contract No..... When fitted.....1943.....

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

Have plans been submitted and approved.....Yes..... System of Distribution.....Two wire..... Voltage of supply for Lighting.....110.....

Heating.....110..... Power.....110..... Direct or Alternating Current, Lighting.....DC Power.....DC..... 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.....Yes..... Are turbine emergency governors fitted with a

trip switch as per Rule..... Generators, are they compound wound.....Yes..... are they level compounded under working conditions.....Yes.....

if not compound wound state distance between generators..... and from switchboard..... Where more than one generator is fitted are they

arranged to run in parallel.....No..... are shunt field regulators provided.....Yes..... 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..... Have certificates of

test for machines under 100 kw. been supplied.....Yes..... and the results found as per rule.....Yes..... Are the lubricating arrangements and the construction

of the generators as per rule.....Yes..... Position of Generators.....Engine room, starboard side on platform.....

..... is the ventilation in way of generators satisfactory.....Yes..... are they clear of inflammable material.....Yes..... if situated

near unprotected combustible material state distance from same horizontally..... and vertically..... are the generators protected from mechanical

injury and damage from water, steam and oil.....Yes..... are the bedplates and frames earthed.....Yes..... and the prime movers and generators in metallic

contact.....Yes..... Switchboards, where are main switchboards placed.....Engine room, starboard side, forward,

bulkhead, near generators.....

are they in accessible positions, free from inflammable gases and acid fumes.....Yes..... are they protected from mechanical injury and damage from water, steam

and oil.....Yes..... if situated near unprotected combustible material state distance from same horizontally..... and vertically..... what insulation

material is used for the panels....."Sindansys"..... if of synthetic insulating material is it an Approved Type.....Yes..... if of

semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule..... Is the frame effectually earthed.....Yes.....

Is the construction as per Rule.....Yes..... including accessibility of parts.....Yes..... absence of fuses on the back of the board.....Yes..... individual fuses

to pilot and earth lamps, voltmeters, etc.....Yes..... locking of screws and nuts.....Yes..... labelling of apparatus and fuses.....Yes..... fuses on the "dead"

side of switches.....Yes..... Description of Main Switchgear for each generator and arrangement of equaliser switches.....Double pole, push

break, knife switches & double pole fuses.....

and for each outgoing circuit.....Double pole, push break, knife switches, & double pole

fuses.....

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule.....Yes..... 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.....Lamps connected to earth via switches & fuses.....

Switches, Circuit Breakers and Fuses, are they as per Rule.....Yes..... are the fuses an approved type.....Yes..... are all fuses labelled as

per Rule.....Yes..... If circuit breakers are provided for the generators, at what overload current did they open when tested..... are the reversed current

protection devices connected on the pole opposite to the equaliser connection..... 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.....Yes.....

Cables, are they insulated and protected as per the appropriate Tables of the Rules.....Yes..... if otherwise than as per Rule are they of an approved type.....

state maximum fall of pressure between bus bars and any point under maximum load.....3V..... are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets.....Yes..... Are paper insulated and varnished cambric insulated cables sealed at the ends.....



Fittings, are all fittings on weather decks, in stoekholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. Yes, if so, how are they protected. Remotely pattern fittings in magazines & spirit rooms.

and where are the controlling switches fitted On main deck above, are all fittings suitably ventilated Yes, are all fittings and accessories constructed and installed as per Rule Yes Searchlight Lamps, No. of 1-10" Incandescent, are their fittings as per Rule Yes Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, are heaters in the accommodation of the convection type No Motors, are all motors constructed and installed as per Rule Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil Yes, if situated near unprotected combustible material state minimum distance from same horizontally — and vertically — Are motors coupled to oil fuel transfer and unit pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment —

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing — Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rules Supplied Control Gear and Resistances, are they constructed and fitted as per Rule Yes Lighting Conductors, where required are they fitted as per Rule Not used Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with —, are all fuses of the cartridge type — are they of an approved type — Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships — Are the cables lead covered as per Rule — Spare Gear, if the vessel is for open sea service have spares been provided as per Rule Yes are they suitably stored in dry situations Yes Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

## PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN <i>No 1</i> ...	<i>1</i>	<i>15</i>	<i>110</i>	<i>136</i>	<i>500</i>	<i>Steam engine</i>		
<i>No 2</i> ...	<i>1</i>	<i>7.5</i>	<i>110</i>	<i>85</i>	<i>500</i>	<i>" "</i>		
EMERGENCY ...								
ROTARY TRANSFORMER								

## GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... ..	15	1	37/072	136	152	40'	VIR	LC AP6187A WE
" " EQUALISER	7.5	1	19/004	65	82	83'	"	" " 6189A " "
.....								
.....								
EMERGENCY GENERATOR ... ..								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								

### MAIN DISTRIBUTION CABLES.

[illegible]

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	NAVIGATION LIGHTS	LIGHTING AND HEATING	Wheel house	10" Projectors	Immersion heater in fuel tank	Heaters for guns 500W - 14	" " " " - 2
1	1		1	1	1	1	1
7/044	7/036		7/036	7/036	7/036	7/036	7/036
31	5		6	19	5	20	10
31	24		24	24	10	24	10
180'	180'		275'	290'	45'	280'	50'
KIR	"		"	"	"	"	"
LC AP6192A WE	6193A		6193A	"	6195A	6193A	6195A

## MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	MOTOR DETAILS									
Fan 12 1/2"	1	1 1/2	1	7/029	14	18	50'	VIR	LC	AP6194A	WE	
" 10"	2	1	1	7/029	11	18	80'	"	"	"	"	
Refrigerators	2	1 1/2	1	3/036	25	10	50'	"	"	6196	"	
Fan 5"	2	1	1	3/036	2	10	100'	"	"	"	"	



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.

W. BRODIE & SONS LTD.  
ENGINEERS  
100, QUEEN STREET, ABERDEEN.

Electrical Engineers.

Date 23. 6. 43.

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass. 90 ft

Minimum distance between electric generators or motors and steering compass. 85 ft

The nearest cables to the compasses are as follows:—

A cable carrying 1 Ampères inside feet from standard compass 5 feet from steering compass.

A cable carrying 25 Ampères 5 feet from standard compass inside 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 1/2 degrees on every course in the case of the standard compass, and 1/2 degrees on every course in the case of the steering compass.

FOR COCHRANE & SONS, LTD.

Builder's Signature.

Date.

V. Gray DIRECTOR

Is this installation a duplicate of a previous case Yes If so, state name of vessel ALLEGIANCE

Plans. Are approved plans forwarded herewith No If not, state date of approval 10/9/41

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

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

The electrical equipment of this vessel was installed under special survey and in accordance with the approved plans and with the Specification. The materials used are of good quality and the workmanship is good. On completion the equipment was operated under working conditions with satisfactory results. and the insulation resistance of all circuits and apparatus was measured and found good. This equipment is in my opinion suitable for a classed vessel.

Noted  
F.P.  
12/8/43.

Total Capacity of Generators 22.5 Kilowatts.

The amount of Fee ... £ 30 : 0 : When applied for, 5 AUG 1943

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

H. F. Cornell  
Surveyor to Lloyd's Register of Shipping.

TUES. 17 AUG 1943

Committee's Minute

Assigned

see minute  
on F.B. Rph.