

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 15. 8. 1940 When handed in at Local Office... 22 AUG 1940 Port of... HULL

No. in Survey held at... Hull Date, First Survey... 21. 6. 40. Last Survey... 12. 8. 1940 (Number of Visits... 6.)

Reg. Book... on the... Steam Trawler... VIZALMA... Tons {Gross... 608 Net... 205

Built at... Drexley By whom built... Cook, W. L. & Co. Yard No... 656 When built... 1940-8

Owners... Little's Steam Towing Co. Port belonging to... Grimsby.

Electrical Installation fitted by... Wm. Broady & Sons Contract No... When fitted... 1940-8

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

Have plans been submitted and approved... Yes System of Distribution... Parallel. Control Current 2 wire Voltage of supply for Lighting... 100

Heating... Power... Direct or Alternating Current, Lighting... Direct Power... If Alternating Current state frequency... Prime Movers,

has the governing been tested and found efficient when the whole load is suddenly thrown on and off... Yes Are turbine emergency governors fitted with a

trip switch as per Rule... Yes 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... Yes 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

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, adjacent to Generator

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... Slate, if of synthetic insulating material is it an Approved Type... if of

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

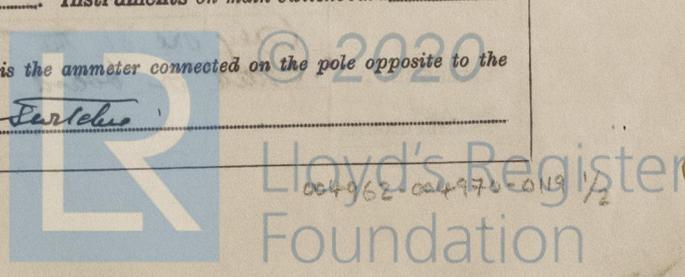
D.P. switches & fuses

and for each outgoing circuit... D.P. Change over switches & fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... Instruments on main switchboard... 2

ammeters... 2 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... Earth lamps & fuses



Switches, Circuit Breakers and Fuses, are they as per Rule Yps, are the fuses an approved type See below are all fuses labelled as per Rule Yps, are the reversed current protection devices connected on the pole opposite to the equaliser connection ✓, have they been tested under working conditions ✓. Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yps.

Cables, are they insulated and protected as per the appropriate Tables of the Rules Yps, 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 4 Volts, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets Yps. Are paper insulated and varnished cambric insulated cables sealed at the exposed ends ✓ with insulating compound ✓ or waterproof insulating tape ✓. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yps, are cables laid under machines or floorplates None, if so, are they adequately protected ✓. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yps or run in conduit ✓. State how the cables are supported and protected Clipped to bulk heads etc. or run in conduit.

Are all lead sheaths, armoring and conduits effectually bonded and earthed Yps. Refrigerated chambers, are the cables and fittings as per Rule None. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yps, where unarmoured cables pass through beams, etc., are the holes effectually bushed Yps and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yps. Emergency Supply, state position None and method of control ✓.

Navigation Lamps, are they separately wired Yps controlled by separate double pole switches Yps and fuses Yps. Are the switches and fuses in a position accessible only to the officers on watch Yps, is an automatic indicator fitted None. Secondary Batteries, are they constructed and fitted as per Rule None, are they adequately ventilated ✓. Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yps. Are fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present None, if so, how are they protected ✓.

and where are the controlling switches fitted ✓, are all fittings suitably ventilated Yps, are all fittings and accessories constructed and installed as per Rule Yps. Searchlight Lamps, No. of Yps, whether ~~portable~~ Yps, are their fittings as per Rule See below. Heating and Cooking, is the general construction as per Rule ✓, are the frames effectually earthed ✓, are heaters in the accommodation of the convection type ✓. Motors, are all motors constructed and installed as per Rule None and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil ✓, if situated near unprotected combustible material state minimum distance from same horizontally ✓ and vertically ✓.

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 Rule ✓. Control Gear and Resistances, are they constructed and fitted as per Rule ✓. Lightning Conductors, where required are they fitted as per Rule Yps. 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 ✓. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type ✓. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule ✓, are they suitably stored in dry situations ✓. Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory Yps.

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	One	10	100	100	300	Steam Engine	✓	✓
EMERGENCY								
ROTARY TRANSFORMER								

*Only one of the two dynamos originally intended for this vessel has been fitted on board. The second dynamo will be fitted when available.*

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 or No. and Dia. of Strands. Sq. Ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	10	1	19/083	100	62	30	V.I.R.	In Conduit
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS								
Aft Deck Accommodation	One	7/036	10	24	120	V.I.R.	Cross & L.C.	
to Castle	"	"	12	24	200	"	do	
Bridge, Chart room etc.	"	7/064	42	46	170	"	do	
Navigation	"	7/029	6	15	170	"	do	
Engine room	"	7/036	12	24	14	"	do	

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	One	7/036	20	24	170	V.I.R.	L.C.	
NAVIGATION LIGHTS	One	3/029	6	5	200	"	do	
LIGHTING AND HEATING	One	3/029	2.4	5	40	"	do	
	"	1/044	2.4	5	40	"	L.C. Cross & braded also H.P. type.	

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.

*None.*

\* The fuses fitted in the sub distribution boards are not of an approved type, but new of different supply have been accepted by the Admiralty. In addition to the circuits enumerated above special circuits have been fitted to Admiralty requirements of which no details are available.

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.

WM BROADY & SON LTD.  
 290, BRIDGE STREET,  
 HULL.

Electrical Engineers.

Date 16 Aug 1940.

COMPASSES.

Minimum distance between electric generators or motors and standard compass.....  
 Minimum distance between electric generators or motors and steering compass.....  
 The nearest cables to the compasses are as follows:—  
 A cable carrying ..... Ampères ..... feet from standard compass ..... feet from steering compass.  
 A cable carrying ..... Ampères ..... feet from standard compass ..... 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 .....  
 Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted .....  
 The maximum deviation due to electric currents was found to be ..... degrees on ..... course in the case of the  
 standard compass, and ..... degrees on ..... course in the case of the steering compass.

*Special Survey*  
*Amalgamated*  
*Electrically*  
*Requirements*  
*Available*

Builder's Signature.

Date.....

Is this installation a duplicate of a previous case..... *Yes* If so, state name of vessel ST APOLLO & ST ZENO.

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

*This installation has been fitted on board under Special Survey in accordance with the plan approved on the 6<sup>th</sup> June 1940 for the ST APOLLO and with the Rules, except as mentioned on leaf. The workmanship & materials are good & when tried under full working conditions & tested as prescribed it was found satisfactory in every respect.*

*Noted*  
*11/9/40.*

Total Capacity of Generators..... 20. Kilowatts.

The amount of Fee ... .. £ 10 : 0 :  
 When applied for, 15. AUG. 1940

Travelling Expenses (if any) £ : :  
 When received, 21st Sept. 1940

*Lloyd's Register*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute.....

Assigned.....

*See minute on FE machine*  
*rlt*

2m.10.38.—Transfer. (MADE IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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