

26 JUN 1942

Rpt. 13.

No. 100,491

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report.....19..... When handed in at Local Office..... 8/6/42..... Port of Newcastle on Tyne

No. in Survey held at Hebburn Date, First Survey 23 Feb Last Survey 27 May 1942
Reg. Book. (Number of Visits.....10.....) 8179

37809 on the NICANIA Tons { Gross 8150
Net 4767

Built at Hebburn By whom built Hawthorn Leslie Yard No. 648 When built 1942

Owners Anglo Saxon Petroleum Co Ltd Port belonging to London

Electrical Installation fitted by Hawthorn Leslie Contract No. _____ When fitted 1942

Is vessel fitted for carrying Petroleum in bulk Yes Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C. Yes Sub.Sig. _____

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

Heating No Power Yes Direct or Alternating Current, Lighting Direct Power Direct 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 _____ 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 _____

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

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 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 Mat Interchem

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, double throw quick break knife switches, and double pole fuses

and for each outgoing circuit Double pole, double throw quick break knife switches and double pole fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes 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 coupled to earth through 2 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 _____

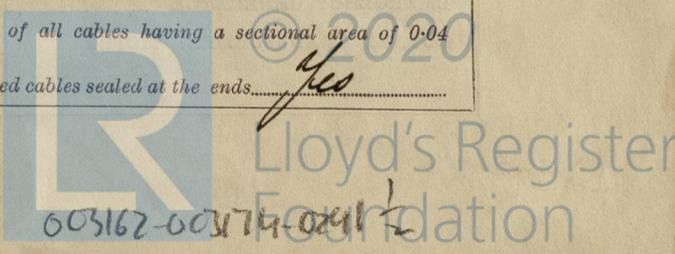
have they been tested under working conditions, and at what current did they operate _____

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 less than 5v, 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 Yes



with insulating compound or waterproof insulating tape Yes. 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 Yes, are cables laid under machines or floorplates Yes, if so, are they adequately protected Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes. State how the cables are supported and protected Lead covered and armoured clipped to metal trays or clamped to steel work in machinery spaces etc., or accommodations lead covered clipped to wood battens, main engine cylinders lights V.P.R. in steel tape.

Are all lead sheaths, armoring and conduits effectually bonded and earthed Yes. Refrigerated chambers, are the cables and fittings as per Rule Yes. Are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes effectually bushed Yes and with what material Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes. Emergency Supply, state position Yes and method of control Yes.

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches Yes and fuses Yes. Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted Yes. Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes what is the battery capacity in ampere hours Yes.

Fittings, are all fittings on weather decks, in stokeholds 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 Wipon flame proof fittings installed in centre scuttle space and where are the controlling switches fitted In officers accommodation, are all fittings suitably ventilated Yes are all fittings and accessories constructed and installed as per Rule Yes. Searchlight Lamps, No. of one, whether fixed or portable Yes, 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 Yes. 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 Yes and vertically Yes. 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 Yes. Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule Yes. Control Gear and Resistances, are they constructed and fitted as per Rule Yes. Lightning Conductors, where required are they fitted as per Rule Yes. 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 Yes, are all fuses of the cartridge type Yes are they of an approved type Yes. Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships Yes. Are the cables lead covered as per Rule Yes. 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 N°1	1	25	110	227	400	Steam engine		
N°2	1	25	110	227	400	Oil (Double)	Less than 150° F	
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 Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	N°1	25	1	37/072	227	246	50'	V.C. L.C+A
" EQUALISER								
"	N°2	25	1	37/072	227	246	104'	V.C. L.C+A
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Sub Main Switchboard	1	34/103	23F	385	600'	V.C.	L.C.A+B
Section B1 Bridge deck	1	19/064	7F	83	24'	V.I.R.	L.C
" B2 Upper deck aft	1	7/064	29	46	171'	V.I.R.	L.C+A
" B3 Lower room lighting	1	19/052	54	64	30'	V.I.R.	L.C+A
" B4 " " instal	1	19/064	82	83	213'	V.I.R.	L.C+A

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	19/064	27	83	630'	V.I.R.	L.C+A
NAVIGATION LIGHTS	1	7/044	25	31	660'	V.I.R.	L.C+A
LIGHTING AND HEATING							
Chart room	1	7/064	27.5	46	120'	V.I.R.	L.C.
Upper deck	1	7/064	12.5	46	69'	V.I.R.	L.C.
Bridge (Port)	1	7/064	31	46	15'	V.I.R.	L.C.
" (Starboard)	1	7/064	16.5	46	60'	V.I.R.	L.C.
Forecastle	1	19/052	8	64	405'	V.I.R.	L.C.A+B
Portable connections	1	7/064	13	46	27'	V.I.R.	L.C.
Upper deck aft (Starboard) portable	1	7/029	6	15	180'	V.I.R.	L.C+A
" " (Port) Crews	1	7/064	17	31	168'	V.I.R.	L.C.
" " (Starboard)	1	7/064	22	31	24'	V.I.R.	L.C.
Paop	1	7/064	24	46	201'	V.I.R.	L.C+A
Engine room 2 B N°9	1	7/036	14.5	24	165'	V.I.R.	L.C+A
" " 10	1	7/029	5.5	15	120'	V.I.R.	L.C+A
" " 11	1	7/029	11	15	120'	V.I.R.	L.C+A
" " 12	1	7/029	8	15	75'	V.I.R.	L.C+A
" " 13	1	7/029	6	15	180'	V.I.R.	L.C+A
" " 14	1	7/029	8.5	15	30'	V.I.R.	L.C+A

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Turning motor	1	7 1/2	1	19/064	60	83	204'	V.I.R. L.C+A
Lathe	1	1 1/2	1	7/029	12	15	60'	V.I.R. L.C+A
Drill	1	2	1	7/036	16	24	60'	V.I.R. L.C+A
Grinder	1	3	1	7/044	24	31	60'	V.I.R. L.C+A
Lub oil pump	1	2	1	7/036	16	24	150'	V.I.R. L.C+A
Fuel oil pump	1	1 1/2	1	7/029	14	15	150'	V.I.R. L.C+A
Vent fan	1	4	1	7/064	32	46	300'	V.I.R. L.C+A
" " " " " "	1	4	1	7/064	32	46	195'	V.I.R. L.C.
Exh " " " " " "	1	0.9	1	3/036	0.8	10	75'	V.I.R. L.C.
Repair " " " " " "	1		1	3/036	4	10	65'	V.I.R. L.C.
Wtts compass	1		1	7/036	20	24	110'	V.I.R. L.C+A
Searchlight Projector	1		1	19/052	50	64	680'	V.I.R. L.C.A+B.
Shore Supply	1		1	37/072		246	180'	V.C. L.C.A.

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.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

Stephenson

Electrical Engineers.

Date *21st May 1942*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *18'-0"*

Minimum distance between electric generators or motors and steering compass *18'-0"*

The nearest cables to the compasses are as follows:—

A cable carrying *14* Ampères *inside* feet from standard compass *—* feet from steering compass.

A cable carrying *14* Ampères *—* 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 *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.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

Stephenson

Builder's Signature.

Date *21st May 1942*

Is this installation a duplicate of a previous case *—* If so, state name of vessel *—*

Plans. Are approved plans forwarded herewith *no* If not, state date of approval *1/12/41*

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith *no*

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 in accordance with the approved plans. 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 in my opinion suitable for a classed vessel.

*Noted
H.M.
2.7.42*

Total Capacity of Generators *50* Kilowatts.

See etc
The amount of Fee ... £ *27 : 10* :

When applied for, *24 JUN 1942*
When received, *—*

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

FRI. 3 JUL 1942

Committee's Minute *—*
Assigned *See Nwc. 2^o 100491*

5m. 4. 39. — Transfer. (MADE AND PRINTED IN ENGLAND.)
(The Surveyors are requested not to write on or below the space for Committee's Minute.)



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