

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 9-2-1940 when handed in at Local Office

Port of

Liverpool Hamburg

No. in Survey held at Stanlow

Date, First Survey 26-1-40 Last Survey 26-1-1940

(Number of Visits.....)

Reg. Book.

23490 on the M.V. "DRUPA"

Tons { Gross
Net

Built at Hamburg

By whom built Deutsche Werft A.G. Kiel

Yard No. 218

When built 1939

Owners Anglo-Saxon Petroleum Co. Ltd

Port belonging to London.

Electric Light Installation fitted by A.E.G.

Contract No.

When fitted 1939

Is the Vessel fitted for carrying Petroleum in bulk Yes.

System of Distribution Two wire

Pressure of supply for Lighting 110 volts, Heating - volts, Power 110 volts.

Direct or Alternating Current, Lighting Direct Power Direct

If alternating current system, state frequency of periods per second -

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off Yes.

Generators, do they comply with the requirements regarding temperature rise Not known, are they compound wound Yes

are they over compounded 5 per cent. Not known, if not compound wound state distance between each generator -

Where more than one generator is fitted are they arranged to run in parallel No, is an adjustable regulating resistance fitted in series with each shunt field Yes.

Have certificates of test results for machines under 100 kw. been submitted and approved No Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing 4

Have certificates for generators under 100 kw. been supplied and approved No

Are all terminals accessible, clearly marked, and furnished with sockets Yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched Yes

Position of Generators In Engine Room, bottom platform, starboard side. Are the lubricating arrangements of the generators as per Rule Yes

in way of the generators satisfactory Yes are they clear of all inflammable material Yes if situated near unprotected

woodwork or other combustible material, state distance of same horizontally from or vertically above the generators - and -

are the generators protected from mechanical injury and damage from water, steam or oil Yes, are their axes of rotation fore and aft Yes

Earthing, are the bedplates and frames of the generating plant efficiently earthed Yes are the prime movers and their respective generators

in metallic contact Yes Main Switch Boards, where placed In Engine Room adjacent to generators.

If the generators and main switchboard are not placed in the same compartment, is each generator provided with

a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard -

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical

injury and damage from water, steam or oil Yes, if situated near unprotected woodwork or other combustible material, state distance of same

horizontally from or vertically above the switchboards - and - are they constructed wholly of durable, non-ignitable non-absorbent

materials Yes, is all insulation of high dielectric strength and of permanently high insulation resistance Yes

is it of an approved type Yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other

non-hygroscopic insulating material, and the slab similarly insulated from its framework - is the non-hygroscopic insulating material of an approved

type - and is the frame effectively earthed Yes. Are the fittings as per Rule regarding: - spacing or shielding of live parts

Yes, accessibility of all parts Yes, absence of fuses on back of board Yes, temperature rise of

omnibus bars Yes, individual fuses to voltmeter, pilot or earth lamp Yes, are moving parts of switches alive in the

"off" position No are all screws and nuts securing connections effectively locked Yes are any fuses fitted on the live side of

switches No Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches

D.P. switch fuses for each generator, D.P. switch & D.P. fuses for each outgoing circuit.

Are turbine driven generators fitted with emergency trip switch as per rule - Are cupboards or compartments containing switchboards composed of

fire-resisting material or lined with approved material Yes Instruments on main switchboard 2 ammeters 2

voltmeters - synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system

Each Lamp. Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules Yes are the fusible cutouts of an approved type Yes have the reversed

current protection devices been tested under working conditions

are all fuses labelled as per rule *Yes*

Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule *Yes*

Cables: Single, twin, concentric, or multicore *Single* are the cables insulated and protected as per Rules IV, V, X, XI, XII or XIII of the Rules *Yes*

If the cables are insulated otherwise than as per Rule, are they of an approved type

Fall of Pressure, state maximum between bus bars and

any point of the installation under maximum load

6 Volts

Cable Sockets, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets

Yes

Paper Insulated and Varnished Cambric Insulated Cables,

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound

or waterproof insulating tape

Cable Runs, are the cables fixed as far as possible in accessible positions

not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage

Yes

are cables laid under machines or floorplates

Guaranteed under

if so, are they adequately protected *Yes*

Are cables in machinery spaces, galleys, lavatories, bathrooms and lavatories lead covered or run in conduit

Yes

Support and Protection of Cables, state how the cables are supported and protected

If cables are run in wood casings, are the casings and caps secured by screws

separate grooves

If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII *Yes*

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements

Yes

Joints in Cables, state if any, anti-hair made, insulated, and protected

None

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands

Yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the

holes efficiently bushed

Yes

state the material of which the bushes are made

Lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas

all apparatus efficiently bonded & earthed

are their connections made as per Rule *Yes*

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule

Yes

Emergency Supply, state

position and method of control of the emergency supply and how the generator is driven

Navigation Lamps, are these separately wired

Yes

controlled by separate switch and separate fuses

Yes

are the fuses double pole

Yes

are the switches and fuses grouped in a position accessible only to the officers on watch

Yes

has each navigation lamp an automatic indicator as per Rule

Yes

Secondary Batteries, are they constructed and fitted as per Rule

Yes

are they ventilated as per Rule

Yes

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight

Yes

are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected

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	2	16	115	140	390	One by steam engine		
AUXILIARY	1	16	115	139	390	One by Oil engine	Distill Oil	Above 150° F.
EMERGENCY	[Copy of Main driven fitted to 2]					Steam driven generator No 629916 - 1848 V.G. 405		
ROTARY TRANSFORMER						Oil engine "No 629917" - 1848 V.G. 405		
						Marion - Goodrich - Handwritten - Distill Oil		

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	No. of	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return).	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Nominal Area per Pole Sq. mm.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	1	95			140	150	16	RUBBER	L.C.A. IN CONDUIT
AUXILIARY GENERATOR	1	1	95			140	150	10	"	"
EMERGENCY GENERATOR										
ROTARY TRANSFORMER										
ENGINE ROOM	1	1	6			13.5	29	20	"	L.C.A.
BOILER ROOM	1	1	6			15.5	29	30	"	"
AUXILIARY SWITCHBOARDS										
SHORE CONNECTION	1	1	95			-	150	30	"	"
NAVIGATION	1	1	10			1.6	38	160	"	"
MFT. LIGHTING	1	1	10			30	38	60	"	"
RUG BOXES ON DECK	1	1	10			2.3	38	30	"	"
D.B.E. 4 D.B. 7	1	1	10			2.3	38	120	"	"
D.B. 7 6 D.B.M.	1	1	10			2.3	38	110	"	"
ACCOMMODATION										
MIDSHIP LIGHTING	1	1	25			50	63	130	"	"
FORWARD LIGHTING	1	1	4			2.3	22	100	"	"
WIRELESS	1	1	16			20	49	140	"	"
SEARCHLIGHT (WINDING ONLY)	1	1	35			-	78	260	"	"
MASTHEAD LIGHT	1	1	1.5			36	9.5	120	"	L.C.A. or L.C.
SIDE LIGHTS	1	1	1.5			36	9.5	40	"	LC
COMPASS LIGHTS	1	1	1.5			18	9.5	10	"	LC
POOP LIGHTS										
CARGO LIGHTS										
HEATERS										

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length (Lead and Return).	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. mm.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR	1	1	35			117.9	78	20	RUBBER	L.C.A.
VENTILATING FANS	1	1	10			26.5	38	40	"	"
"	1	1	10			26.5	38	120	"	"
LATHE MOTOR	1	1	2.5			13.8	17	20	"	"
DRILLING M/C	1	1	4			17.7	22	25	"	"
GRINDER	1	1	6			24.5	29	20	"	"
F.O. PUMP	1	1	4			17.7	22	40	"	"
L.O. SEPARATOR	1	1	4			17.7	22	40	"	"

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The Electrical Equipment is installed in accordance with the approved plans.

All Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Electrical Engineers.

Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass

30 ft. (Vibrating Fan Motors)

Minimum distance between electric generators or motors and steering compass

30 ft (do)

The nearest cables to the compasses are as follows:—

A cable carrying 36 Amperes led into 4 feet from standard compass 4 feet from steering compass.

A cable carrying 36 Amperes 4 feet from standard compass led into 4 feet from steering compass.

A cable carrying 16 Amperes 15 feet from standard compass 10 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power have been adjusted with and without the electric installation at work at full power found satisfactory.

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.

Builder's Signature.

Date

Is this installation a duplicate of a previous case

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The electrical equipment of this vessel has been examined as far as practicable, in accordance with the Secretary's letter of 16/12/39. Details of the completed installation were compared with the approved plans & so far as could be ascertained, found to be in accordance with same. The materials and workmanship are good.

An insulation test was carried out and the readings obtained were satisfactory. The steam engine driven generator was examined under working conditions & the governing & compounding found satisfactory. The oil engine driven generator could not be tested.

The electrical equipment appears to be installed in accordance with the requirements of the Society's Rules for Electrical Equipment.

The electrical equipment appears to be installed in accordance with the requirements of the Society's Rules for Electrical Equipment.

Total Capacity of Generators

32 Kilowatts.

The amount of Fee ... £

When applied for,

19

Travelling Expenses (if any) £

When received,

19

Committee's Minute

Assigned

See Ham J.C. 24176a



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