

# 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.....<sup>21.06.44</sup> Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle on Tyne Reg. Book. Date, First Survey 19.03.43 Last Survey 30.06.44  
(Number of Visits 15)

on the M.V. "SAN VELINO" Tons { Gross 8210 Net.....

Built at HEBBURN-ON-TYNE By whom built HAWTHORN LESLIE & Co. LTD Yard No. 661 When built 1944

Owners EAGLE OIL & SHIPPING Co. LTD. Port belonging to LONDON

Electrical Installation fitted by HAWTHORN, LESLIE & Co. LTD. Contract No. 661 When fitted 1944

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 INSULATED Voltage of supply for Lighting 110

Heating..... Power 110 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 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

....., 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

....., 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 "INTEROHM", 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

CHANGE-OVER KNIFE SWITCH & D.P. "ZED" FUSES FOR NO. 1 GENERATOR, DOUBLE POLE

KNIFE SWITCH & D.P. "ZED" FUSES FOR NO. 2 GENERATOR.

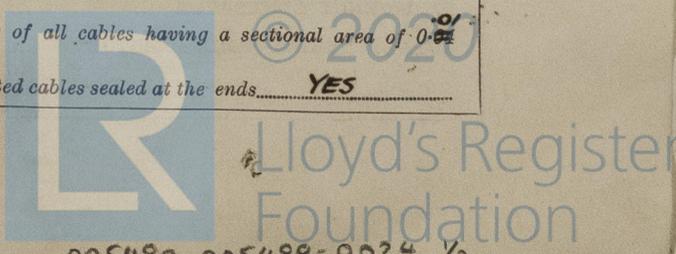
and for each outgoing circuit DOUBLE POLE CHANGE-OVER KNIFE SWITCH & D.P. "ZED" FUSES.

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 CONNECTED TO "E" THROUGH 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 <4.4, are the ends of all cables having a sectional area of 0.01 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 YES 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 -. State how the cables are supported and protected LEAD COVERED & ARMOURD CABLES CLIPPED TO TRAY PLATES.

CABLES ALONG FORE & AFT GANGWAYS RUN IN WOOD CLEATS.  
LEAD COVERED CABLES CLIPPED TO WOOD GROUNDS IN ACCOMMODATION.

Are all lead sheaths, armouring 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 banded YES and with blank material -. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule YES. Emergency Supply, state position - and method of control -.

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 -, are they adequately ventilated - what is the battery capacity in ampere hours 237.

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 -.

GASTIGHT FITTINGS IN WELDED STEEL ENCLOSURES WITH GLAZED APERTURES.  
and where are the controlling switches fitted IN DISTRIBUTION BOXES ON BRIDGE DECK, are all fittings suitably ventilated YES, are all fittings and accessories constructed and installed as per Rule YES. Searchlight Lamps, No. of -, whether fixed or portable -, are their fittings as per Rule -. 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 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 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 -. 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.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	25	110	227	685	STEAM ENGINE		
	1	25	110	227	676	DIESEL	ABOVE 150° F.	
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load 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	25	1	37/072	227	246	54	V.C.	L.C.A.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
			In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS	1	37/083	184	296	162	V.C.	L.C.A.
MIDSHIP SWITCHBOARD	1	0.2 SQ. IN.	184	385	408	MINERAL INSULATED	COPPER COVERED.
ENGINE ROOM MOTORS	S.B.5	37/064	123	130	213	V.I.R.	L.C.A.
ENGINE ROOM LIGHTING	S.B.4	19/064	64.8	83	30	V.I.R.	L.C.A.
CREW ACCOMMODATION AFT.	S.B.2	7/064	25.6	46	171	V.I.R.	L.C.A.B.
ENGINEERS' ACCOMMODATION S.B.3	1	19/052	39.8	64	195	V.I.R.	L.C.A.
MIDSHIP ACCOMMODATION S.B.1	1	19/064	76.4	135	48	V.C.	L.C.

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	19/064	27	135	105	V.C.	L.C.
NAVIGATION LIGHTS	1	7/036	1.8	24	186	V.I.R.	L.C.B.
LIGHTING AND HEATING	ALTERNATIVE SUPPLIES FROM MAIN SWITCHBOARD.						
ENGINE ROOM MOTORS. DIST. FUSE BOARD	1	37/064	42.9	130	30	V.I.R.	L.C.A.
ENGINE RM. LIGHTING	"	"	"	"	"	"	"
" " " " " " " " " "	"	"	"	"	"	"	"
" " " " " " " " " "	"	"	"	"	"	"	"
CREW ACCOMMODATION AFT.	"	"	"	"	"	"	"
" " " " " " " " " "	"	"	"	"	"	"	"
ENGINEERS' ACCOMMODATION	"	"	"	"	"	"	"
PORTABLE CONNECTIONS AFT.	"	"	"	"	"	"	"
FORECASTLE LIGHTING	"	"	"	"	"	"	"
MIDSHIP ACCOMMODATION	"	"	"	"	"	"	"
" " " " " " " " " "	"	"	"	"	"	"	"
PORTABLE CONNECTIONS MIDSHIPS	"	"	"	"	"	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
TURNING MOTOR	1	7 1/2	19/064	60	83	204	V.I.R.	L.C.A.
VENTILATING FAN AFT.	1	1 1/2	7/036	12.9	24	180	V.I.R.	L.C.A.
" " " " " " " " " "	1	4	7/064	33	46	195	V.I.R.	L.C.A.B.
" " " " " " " " " "	1	3	7/064	25	75	174	V.C.	L.C.
LATHE MOTOR	1	3	7/036	27.4	28	60	V.C.	L.C.A.
DRILLING M/C MOTOR	1	3	7/036	26.5	28	60	V.C.	L.C.A.
GRINDING M/C MOTOR	1	3	7/036	24	28	60	V.C.	L.C.A.
LUB. OIL PURIFIER	1	2	7/036	17.2	28	150	V.C.	L.C.A.
OIL FUEL STANDBY PUMP	1	1	7/029	9.2	15	150	V.C.	L.C.A.
THIMBLE TUBE BOILER O.F. PUMP	1	1	7/029	9.9	15	120	V.C.	L.C.A.
" " " " " " " " " "	1	1	7/029	9.8	15	120	V.C.	L.C.A.
EVAPORATOR FEED PUMP	1	1	7/029	10	15	150	V.C.	L.C.A.
BOILER TUBE CLEANING APPARATUS	1	1/2	7/029	4	15	120	V.C.	L.C.A.
FRESH WATER PUMP AFT	1	1	7/029	10	15	156	V.C.	L.C.A.
" " " " " " " " " "	1	1	7/029	10	15	72	V.C.	L.C.
GALLEY AIR COMPRESSOR	1	0.3	3/036	2.6	10	210	V.C.	L.C.
DOMESTIC REFRIGERATORS	2	1/2	3/036	5.3	10	42/93	V.C.	L.C.

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.

*W. B. Brown*

Electrical Engineers.

Date

19-6-44

COMPASSES.

Minimum distance between electric ~~generators~~ or motors and standard compass 31 FEET.

Minimum distance between electric ~~generators~~ or motors and steering compass 31 FEET

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 INSIDE 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 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.

Builder's Signature.

Date

19-6-44

Is this installation a duplicate of a previous case No If so, state name of vessel

Plans. Are approved plans forwarded herewith If not, state date of approval 12-11-43

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 has been installed in conformity with the Society's Rules and Regulations, and the arrangements are in accordance with or equivalent to those shown on the approved plans.

Materials used are of good quality and the workmanship is satisfactory. On completion the insulation resistance of all circuits was good and the generator operated on test and power tests, with satisfactory results.

The equipment, as installed, is, in my opinion, suitable for a pleasure vessel.

Noted

How

14.7.44

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 27 : 10 : When applied for, 29 JUN 1944

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

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES, 26 JUL 1944

Assigned

see minute on 26 Rpt

5m.4.30.—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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