

Rpt. 13.

No. 6166.

Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

9 JUL 1948

Date of writing Report 10-6-48. When handed in at Local Office 6-7-48. Port of Oslo. Received at London Office.....

Survey held at Trondheim Date, First Survey 9-7-47. Last Survey 19-4-48. No. in Reg. Book 16969 on the M.Y. "UDDU" ex. M.M.S. 1013 (Number of Visits 5)

Built at Peterhead By whom built Geo. Forbes & Co. (Peterhead) Ltd Yard No. - When built 1943 Owners Skips A/S Sempe Port belonging to Trondheim Tons {Gross 313 Net 109}

Electrical Installation fitted by O. Lund-Johansen Contract No. ✓ When fitted 1948

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

Have plans been submitted and approved. yes. System of Distribution 2-wire Voltage of supply for Lighting 220

Heating 220 Power 220 Direct or Alternating Current, Lighting ✓ 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 - 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 - and the results found as per rule - Are the lubricating arrangements and the construction of the generators as per rule yes

Position of Generators 1-starboard & 1-port placed in engine room 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

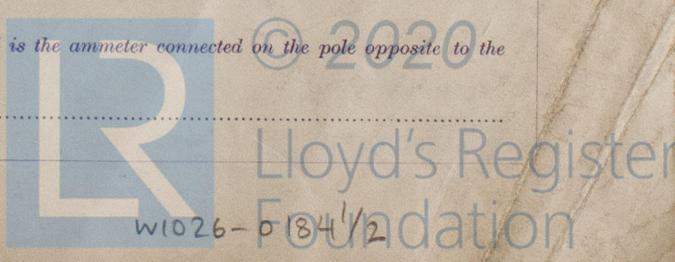
Switchboards, where are main switchboards placed in engine room are they in accessible positions, free from inflammable gases and acid fumes yes are they protected from mechanical injury and damage from water, steam and oil yes if situated near unprotected combustible material state distance from same horizontally - and vertically - what insulation material is used for the panels Sindanyo 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 No Description of Main Switchgear for each generator and arrangement of equaliser switches A double pole switch and fuses on each pole. See Oslo letter of the 12th April and Secretary's reply of the 14th April reference E.

and for each outgoing circuit double pole switch and 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 yes.



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								
" " EQUALISER	54 25	1	2x95mm ² 2x70mm ²	~90 ~90		50 18	rubber "	Armoured, lead covered Lead covered
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS								
Lighting foreship	1	4mm ²	~6	✓	22.5	~150	rubber	in pipes
" " midships	1	35 "	~15	✓	78	~12	"	"
Navigation lights	1	4 "	~1	✓	22.5	~20	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS								
NAVIGATION LIGHTS	1	1.5mm ²	1	✓	9.5	~150	"	"
LIGHTING AND HEATING	1	1.5 "	6	✓	9.5	-	"	"
oil heater	1	2x6mm ²	12.5	✓	29	35	"	in pipes

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE REGISTERED.	No.	B.H.P.						
engine	1	12	1	16mm ²	55	49	160	" in pipes
"	1	2	1	4 "	9	22.5	140	"
"	1	10	1	16 "	45	49	30	"
ump.	1	2	1	6 "	2	29	30	"

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* are the reversed current protection devices connected on the pole opposite to the equaliser connection *yes* have they been tested under working conditions *yes* 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 *yes* state maximum fall of pressure between bus bars and any point under maximum load *5 mlt* 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 exposed 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 *no* if so, are they adequately protected *no* Are cables in machinery spaces, galleys, laundries, etc., lead covered *no* or run in conduit *no*

State how the cables are supported and protected *metal clips & screws, sheet iron plating, galvanized steel pipes, clips & saddles*

Are all lead sheaths, armouring and conduits effectually bonded and earthed *yes* Refrigerated chambers, are the cables and fittings as per Rule *no*

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 effectively bushed *yes* and with what material *Alternative Lighting*, are the groups of lights in the engine (and boiler) rooms arranged as per Rule *yes* Emergency Supply, state position *no* and method of control *no*

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 automatic indicator fitted *yes* Secondary Batteries are they constructed and fitted as per Rule *no* are they adequately ventilated *no*

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 *no* if so, how are they protected *no* and where are the controlling switches fitted *no* are all fittings suitably ventilated *no*

are all fittings and accessories constructed and installed as per Rule *yes* Searchlight Lamps, No. of *1* whether fixed or portable *no* are their fittings as per Rule *no* Heating and Cooking, is the general construction as per Rule *no* are the frames effectually earthed *no* 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 *no* and vertically *no* Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing *no* Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule *no* 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 *no* are all fuses of the cartridge type *no* are they of an approved type *no* If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type *no* Spare Gear, if the vessel is for *short trades* 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 megger 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	1	54	220	235	1600.	Diesel. L. Gardner & Sons.	Heavy oil.	-
	1	25	220	115	1000.	" R. A. Lister	"	-
EMERGENCY								
ROTARY TRANSFORMER								

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.

Ø. Lund-Johansen
 (signature)

Electrical Engineers. Date *2-6-48*

COMPASSES.

Minimum distance between electric generators or motors and standard compass *ab. 25'*
 Minimum distance between electric generators or motors and steering compass *ab. 18'*

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. } *Electric light in wheel house.*
 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 *with*

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 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, whether insulation tests, etc., have been made, opinions as to class, etc.)

The quality of workmanship and materials are good and insulation tests made throughout and the installation maintained under working conditions and found in good working order.

The original installation of M.N.S. 1013 has been retained as far as practicable and together with the necessary renewals fitted in accordance with plan approved 10th March 1948 and the Secretary's letter concerning same, with exception of amendments respecting the 54Kw. generator cables and the switch on the main switchboard which, as a temporary measure, have been arranged as per Oslo letter of the 12th April last and the Secretary's letter E dated 14th April last.

It is recommended that this installation be classed in the Register Book.

Total Capacity of Generators *79* Kilowatts.

The amount of Fee Kr. *160,00*
 Travelling Expenses (if any) Kr. *✓*
 When applied for, *18/5 19.48*
 When received 19.....

Surveyor to Lloyd's Register of Shipping

Sørensen

Committee's Minute

FRI. 26 NOV 1948

Requested not to write on or below the space for Committee's Minute.

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