

Rpt. 13.

No. 198c.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

27 JAN 1947

Date of writing Report... 9-1-1946... When handed in at Local Office... 19... Port of GRONINGEN

No. in Survey held at Delfzijl Date, First Survey 20-8-46 Last Survey 15-1-1947
 Reg. Book. (Number of Visits... 4...)

54585 on the Motorvessel "ARBO" Tons { Gross 200
 Net 126

Built at Waterhuizen By whom built N.V. Gebr. v. Diepen's Yard No. 805 When built 1933
Scheepswerven.

Owners Mr. J. de Boer Port belonging to Delfzijl

Electrical Installation fitted by Herman Eekels Contract No. When fitted 1947

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 two wire Voltage of supply for Lighting 24

Heating - Power - Direct or Alternating Current, Lighting Direct Bower - 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 - Generators, are they compound wound no, are they level compounded under working conditions -, if not compound wound state distance between generators - and from switchboard 8 ft. Where more than one generator is fitted are they arranged to run in parallel -, are shunt field regulators provided - 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 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 porcelain and cast-steel boxes, 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 quick circuit breaking switch with double pole fuses.

 and for each outgoing circuit Double pole quick circuit, breaking switch with double pole fuses.

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

ammeters one 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 two earth lamps.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. -

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 - 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 - 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. Yes, are they adequately ventilated. 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. -, if so, how are they protected. -

and where are the controlling switches fitted. -, are all fittings suitably ventilated. -, are all fittings and accessories constructed and installed as per Rule. -. Searchlight Lamps, No. of none, 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. - 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. steel mast. 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. 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	one	0.96	24	48	1200	Main engine	Diesel oil	above 150° F.
EMERGENCY ...								
ROTARY TRANSFORMER								

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	0.96	1	20	40	49	60	rubber	lead covered and steel wire braided.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

[illegible][illegible][illegible]

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.

Electrical Engineers. Date 9-1-47.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 5 Metres

Minimum distance between electric generators or motors and steering compass 8 Metres

The nearest cables to the compasses are as follows:—

A cable carrying 0.18 Ampères 20 feet from standard compass 55 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 unknown

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 no. If so, state name of vessel

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

This installation has been fitted in conformity with the Society's Rules and Regulations and the Secretary's letter and approved plan, was found in good working condition when tried and the electrical installation merits in my opinion the Committee's approval.

Noted Jan 20.2.47

Total Capacity of Generators 0.96 Kilowatts.

The amount of Fee ... £1. 75.-
Travelling Expenses (if any) £ : :
When applied for, 19...
When received, 19...

Surveyor to Lloyd's Register of Shipping.

FRI. 21 FEB 1947

Committee's Minute

Assigned See P.B. mch. rpt.



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