

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

No. 391

Writing Report 3rd May 1952 When handed in at Local Office Bremen Received at London Office 14 JUN 1952
Survey held at Bremen/Vegesack Date, First Survey 22nd October Last Survey 9th April 1952
(No. of Visits 20)
Tons Gross 11083
Net -
When built 4.52
By whom built Bremen Vulkan Yard No. 816
Port belonging to Göteborg
Fitted by Allgemeine Elektricitätsgesellschaft, Bremen When fitted 4.52

Equipped for carrying Petroleum in bulk yes Is vessel equipped with D.F. yes E.S.D. yes Gy.C. yes Sub.Sig. - Radar yes
Have they been submitted and approved yes System of Distribution 2 wire Voltage of Lighting 110 V
Power 220 V D.C. DC Lighting DC Power DC If A.C. state frequency -

Have the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted yes
Generators, are they compound wound yes, and level compounded under working conditions yes
Compound wound state distance between generators -, and from switchboard - Are the generators arranged to run yes
Are shunt field regulators provided yes Is the compound winding connected to the negative or positive pole yes
Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing yes Have certificates of machines under 100 kw. been supplied yes and the results found as per Rule yes

Location of Generators engine room bottom platform, port side forward and aft and starboard side forward
Ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and from water, steam and oil yes
Switchboards, where are main switchboards placed engine room
Main board, first platform level above engine-room plates and aux. board second platform above
in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water, steam and oil yes, what insulation is used for the panels dead front, Pertinax mounting, if of synthetic insulating material yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule yes
Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgear 2 pole circuit breakers, third pole interlocked for equalizer

switch and fuse gear (or circuit breakers) for each outgoing circuit double poles switches and fuses on each insulated

Partments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 9
voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reversed current devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided " "

Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes
are all fuses labelled yes If circuit breakers are provided for the generators, at what current do they operate 815 Amps, and at what current do the reversed current protective devices operate 95 Amps

Section Boards and Distribution Boards, is the construction as per Rule yes
are they insulated and protected as per Rule yes, if otherwise than as per Rule are they of an Approved Type -
Minimum fall of pressure between bus bars and any point under maximum load 6 Volts, are the ends of all cables having a sectional area of 0.1 square inch and above provided with soldering sockets yes Are all paper insulated and varnished cambric insulated cables at the ends yes Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, or risk of mechanical damage yes, are any cables laid under machines or floorplates yes, if so, are they protected yes Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit "
"HR" type " State how the cables are supported or protected Supported by cable racks and clips

Cables spaced and protected where necessary by sheet iron plates. Cables to fore ship supported in cable with expansion bends, and clips spaced in accordance with Rule requirements, cables protected " from the weather, "
Cable sheaths, armoring and conduits effectually bonded and earthed yes Are all cables passing through decks and watertight provided with deck tubes or watertight glands yes, where unarmoured cables pass through beams, etc., are the holes bushed yes Refrigerated chambers, are the cables and fittings as per Rule yes

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... **yes**... Emergency Supply, state battery capacity in ampere hours. **None**

Navigation Lamps, are they separately wired... **yes**... controlled by separate double pole switches and fuses... **yes**... Are the switches a position accessible only to the officers on watch... **yes**... is an automatic indicator fitted... **yes**... Is an alternative supply provided...

Secondary Batteries, are they constructed and fitted as per Rule... **yes**... are they adequately ventilated... **yes**... state battery capacity in ampere hours. **24 Volt 32 Amp./hrs.**

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weather proofed... **yes**... Are any 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... **flame proof and strong wire guards**...

and where are the controlling switches fitted... **bridge house**... Are all fittings suitably ventilated... **yes**...

Searchlight Lamps, No. of... **2**... whether fixed or portable... **1 and 1**... are they of the carbon arc or of the filament type... **filament**...

Heating and Cooking, is the general construction as per Rule... **yes**... are the frames effectually earthed... **yes**... are the fittings accommodation of the convection type... **yes**... Motors, are all motors constructed and installed as per Rule and placed in weather compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil... **yes**...

Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire 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 sea 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 installed... **yes**... Rule... Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships complied with... **yes**... are all fuses of an Approved Cartridge Type... **yes**... make of fuse... **Siemens**... Are the fittings...

rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships... **yes**... Are the cables lead covered as per Rule... **yes**... E.S.D., if fitted state maker... **Atlas Werke A.G.**... location of transmitter... **Frame Nos. 158/9**... and receiver... **Frame Nos. 158/9**...

Spare Gear, if the vessels for open sea service have spares been provided as per Rule and 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	MAKER.	RATED AT				Revs. per Min.	TYPE.	PRIME MOVER.	MAKE.
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.				
MAIN ...	3	AEG	150	230	652	450	Diesel	MAN/Bremer	Water pump	
"	1	H. Still	35	230	152	600	Steam-E	Bohn & Kähler	Water pump	
EMERGENCY ...	2	AEG	45	115	390	1450	-	-	Water pump	

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ... I.	150	3	300	652	687	36	rubber	metal braided
" " EQUALISER ... II.	150	3	150	326	441	36	"	"
" " " III.	150	3	300	652	687	110	"	"
" " " IV.	150	3	150	326	441	110	"	"
" " " V.	150	3	300	652	687	210	"	"
" " " VI.	150	3	150	326	441	210	"	"
steam GENERATOR ...	35	1	185	152	169	152	"	"
EMERGENCY GENERATOR ...	52	2	150	258	294	193	"	"
ROTARY TRANSFORMER: MOTOR	45	2	240	390	396	110	"	"

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Distribution board I lighting	1	70	80	89	680	rubber	Metal braided
" " II "	1	35	60	77	112	"	"
" " III "	1	35	60	77	96	"	"
" " IV "	1	120	160	175	680	"	"
" " V "	1	50	100	100	224	"	"
" " VI "	1	50	100	100	146	"	"
" " Navigation lights	1	2,5	2,7	13	780	"	"
" " I - 220 V	1	25	60	63	640	"	"
" " II - Fans	1	16	50	50	184	"	"
" " III - Heating	1	35	80	80	310	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Distribution Board IV heat & fans	1	35	80	80	640	rubber	metal braided
" VII refig. plant	1	16	35	55	310	"	"
" VIII workshop	1	16	35	55	118	"	"
" Purifier	2	150	300	300	138	"	"

MOTOR CABLES.

IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
		B.H.P.	Revs. per Min.							
Water pump	3	55	2	95	213	218	170	rubber	metal braided	
Water pump	2	16	1	70	63	89	79	"	"	
Transfer pump	1	14	1	50	55	72	210	"	"	
Water pump	1	2,5	1	4	10	15	195	"	"	
Water pump	1	2,5	1	4	10	15	195	"	"	
Circ. pump	2	2,3	1	4	10	15	215	"	"	
Gear	1	16	1	35	63	78	124	"	"	
Water pump	1	5	1	6	21	21	127	"	"	
Room fan	1	6,5	1	16	28	35	190	"	"	
Room fan	1	3	1	4	13	15	158	"	"	
Water pump	1	20	1	70	79	89	230	"	"	
Accol. pump	1	14	1	50	56	72	79	"	"	
Gear	2	17	1	35	70	78	90	"	"	

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