

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

NO NOV 1951

Date of writing Report 12th Feb 1951 When handed in at Local Office _____ 19____ Port of Copenhagen

No. in Survey held at Elsinore Date, First Survey 13th July Last Survey 22nd September 1951

Reg. Book. _____ (No. of Visits 15)

40085 on the Steel Sc. TH. ADLER SVANHOLM Tons { Gross 3046.57
Net 1598.02

Built at Elsinore By whom built Helsingør Skibs- & Mask. Yard No. _____ When built 1951

Owners Det Danske Kulkompagni Port belonging to Copenhagen

Installation fitted by Helsingør Skibs- & Mask. Byggers When fitted 1951

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

Plans, have they been submitted and approved yes System of Distribution two wire Voltage of Lighting 220

Heating ✓ Power 220 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency ✓

Prime Movers, has the governing been found as per Rule when full load is thrown on and off yes Are turbine emergency governors fitted with a trip switch ✓ Generators, are they compound wound yes, and level compounded under working conditions yes, if not compound wound state distance between generators ✓ and from switchboard ✓ Are the generators 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 See below and the results found as per Rule ✓

Position of Generators The two 15 kw. generators on a platform starboard side of engine room is the ventilation in way of generators satisfactory yes are they clear of inflammable material and protected from mechanical injury and damage from water, steam and oil yes Switchboards, where are main switchboards placed on the engine room platform, emergency switchboard starboard side of engine room casing.

are they 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 Indanyo, if of synthetic insulating material is it an Approved Type ✓, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule ✓ Is the construction as per Rule, including locking of screws and nuts yes Description of Main Switchgear for each generator and arrangement of equaliser switches A double pole switch and a fuse in each pole.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit A double pole switch and a fuse in each pole.

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 are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection ✓ Earth Testing, state means provided one set of earth lamps and Voltmeter with ohm scale.

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

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule yes

Cables, are they insulated and protected as per Rule 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 2 Volts, are the ends of all cables having a sectional area of 0.01 square inch and above provided with soldering sockets yes Are all paper insulated and varnished cambric insulated cables sealed at the ends ✓ 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 any cables laid under machines or floorplates No, if so, are they adequately protected ✓ Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit ✓ or of the "HR" type ✓ State how the cables are supported or protected The cables are supported by galvanized steel clips, lead covered and steel wire armoured cables used.

Are all lead sheaths, armoring and conduits effectually bonded and earthed 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 effectively bushed ✓ Refrigerated chambers, are the cables and fittings as per Rule ✓

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes. Emergency Supply, state position on by getting in engine room casing

Navigation Lamps, are they separately wired yes controlled by separate double pole switches 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. Is an alternative supply provided yes

Secondary Batteries, are they constructed and fitted as per Rule yes, are they adequately ventilated yes state battery capacity in ampere hours yes

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof yes. Are any 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 yes and where are the controlling switches fitted yes. Are all fittings suitably ventilated yes

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

Heating and Cooking, is the general construction as per Rule yes, are the frames effectually earthed yes, are heaters in the accommodation of the convection type yes. Motors, are all motors constructed and installed as per Rule and placed in well-ventilated 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 in the pump 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 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 yes, are all fuses of an Approved Cartridge Type yes, make of fuse 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

E.S.D., if fitted state maker Hughes location of transmitter frame 80-81 pad and receiver frame 80-81 back

Spare Gear, if the vessel is 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				PRIME MOVER.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	Worley's Ltd, Aston	15	220	68	600	Steam	E. Reed & Son, Ltd. Nottingham
EMERGENCY ... ROTARY TRANSFORMER	1	Kaiser Werke, Berlin	10	220	45.5	1250	Heavy oil	Buhl, Kehlundborg

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return leads).	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 ...	15	1	35	68	78	8, 16	Vulcan	Lead covered.
" " EQUALISER ...							rubber	Steel wire armoured.
EMERGENCY GENERATOR ...	10	1	25	57	63	6	"	"
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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 leads).	INSULATION.	PROTECTIVE COVERING.
Amidships N 6	1	10	20	38	125	"	"
Steering gear	1	10	25	38	14	"	"

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return leads).	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.			
Light aft N 3	1	6	15	27	50	Vulcan	Lead covered.
amidships N 4a	1	16	30	48	130	rubber	Steel wire armoured.
Wireless N 5	1	10	13	38	130	rubber	"
Navigation light N 12	1	2.5	2	13	130	"	"
Refrigerating machinery, promiscuous	1	6	16	27	20	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Steering gear	1	5	2	6	20	2.27	40	"	"
Engine room fans	2	1.1	1	1.5	5.7	7	50	"	"
Turning gear	1	3	2	4	13	21	20	"	"

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.

HELSINGØR SKIBSVÆRFT OG MASKINBYGGERI
AKTIESELSKAB

J. Jørgensen *T. Knudsen*

Electrical Contractors.

Date 19/10 - 51

COMPASSES.

Have the compasses been adjusted under working conditions.....

HELSINGØR SKIBSVÆRFT OG MASKINBYGGERI
AKTIESELSKAB

J. Jørgensen *T. Knudsen*

Builder's Signature.

Date 19/10 - 51

Have the foregoing descriptions and schedules been verified and found correct. Yes

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

Plans. Are approved plans forwarded herewith Yes If not, state date of approval. ✓

Certificates. Are certificates of test for motors engaged on essential sea 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 installation has been made under special survey in accordance with the Rules, the approved plans and the Secretary's letter Eng. dated 27th March 1951.

The material used has been examined and tested as per Rule and the workmanship is good.

On completion the whole installation has been megger tested and tested under working conditions and found satisfactory

Total Capacity of Generators 40 Kilowatts.

The amount of Fee ... £ 750

When applied for,

9/11 1951

When received,

19

Travelling Expenses (if any) £

S. Clausen *Lund*

Surveyor to Lloyd's Register of Shipping.

FRI. 30 NOV 1951

Committee's Minute.....

Assigned See F.E. mchey. rpt.

2m p. 46.—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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