

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office..... 17 MAR 1948

Date of writing Report... 13/3 1948 When handed in at Local Office... 13/3 1948 Port of HELSINGBORG.

No. in Survey held at Helsingborg Date, First Survey 9/11-47 Last Survey 11/3 1948
Reg. Book. (Number of Visits... 13)

37814 on the M/S "SOMMEN". Tons {Gross... 3927
Net... 2608

Built at Richmond, Cal. By whom built Kaiser Cargo Inc. Yard No. 68 When built 1945

Owners Rederi A/B Sigyn Port belonging to Helsingborg

Electrical Installation fitted by - Contract No. - When fitted 1945

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

Have plans been submitted and approved No System of Distribution Two wire system Voltage of supply for Lighting 120

Heating 240 Power 240 Direct or Alternating Current, Lighting Dir. Power Dir. 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 Yes, are shunt field regulators provided Yes 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 - and the results found as per rule - Are the lubricating arrangements and the construction

of the generators as per rule Yes Position of Generators Port side in the 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 Port side in the 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 Dead front type, 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 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 5 pole disc link

circuit breaker with overload and reversed current trips (including equaliser switch)

and for each outgoing circuit Double and three-pole circuit breakers with overload current trips

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 4

ammeters 2 voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection Ammeter on each pole Earth Testing, state means provided Ohm meter with pole switch and earth lamps

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 1350 A, 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 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 -

state maximum fall of pressure between bus bars and any point under maximum load 5 V., are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets No 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. No, if so, are they adequately protected. Yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. Yes. State how the cables are supported and protected. Supported in runner bar with metal clips

Are all lead sheaths, armoring 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 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. Port side aft in Engine Room and method of control. Automatic start

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 what is the 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 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

are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of. 5, whether fixed or portable. Fixed, are their fittings as per Rule. Yes. 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. 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. Yes and vertically. Yes. 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. 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 services been supplied and the results found as per Rule. Yes. Control Gear and Resistances, are they constructed and fitted as per Rule. Yes with exception of separating switches at motors

Lighting 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 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.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	2 x 250	120/240	1043	450	Diesel engine	Diesel oil Above 150°F.	
EMERGENCY	1	15	120/240	62,5	1450	"	"	
ROTARY TRANSFORMER	2	8	120	8,4	1800	"	"	

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	250			1043			Paper	Armoured
" " EQUALISEE								
EMERGENCY GENERATOR For Gyro and Radio	15			62,5			"	"
ROTARY TRANSFORMER/MOTOR	8			12,4			"	"
" " GENERATOR							"	"

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	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.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Heating	1	185	240	330	50	Paper	Armoured

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1		15				
NAVIGATION LIGHTS Emergency	1	2,5	1	13	40	Rubber	Lead cov. & arm.
LIGHTING AND HEATING							
Heating acc. Main deck, starboard	1	50	80	160	14	Paper	Armoured
" " " " port	1	50	80	160	14	"	"
" " above main deck	1	70	80	200	20	"	"
Air heaters	1	2,5	10,3	13	40	Rubber	Lead cov. & arm.
Fresh water heater (Engine Room)	1	35	58	127	30	Paper	Armoured.
Lubricating oil & fuel oil heaters	1	25	68	102	45	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.					
Air compressors	2	25			92		
Emergency compressor	1	5			19		
Fuel oil booster p.	2	0,75			3,25		
Lubr. oil purifier	1	5,6	1	6	22	29	40 Rubber
Fuel oil purifier	2	1			4,6		
" " transf.	1	15			57		
Lubr. " pumps	2	40			148		
F.W. circulating pumps	2	15			55		
S.W. " "	2	10			38,6		
Sanitary pump	1	7,5			30		
S.W. priming	1	2			8,2		
Bilge pump	1	7,5			28,6		
Bilge- and ballast pump	1	7,5			30		
General serv. pump	1	40			145		
Fire pump	1	40			145		
Refrigerating compressors	2	7,5			28,5		
" " "	2	10			38		
Workshop lathe	1	2			8,1		
Winches	12	50			183		
Boat winches	2	12,5			50		
Engine Room ventilating fan	2	7,5			30		
Turning gear	1	5			18,2		
Steam generator motor	1	5			20		
Prime pump	2	2			8,2		
Steering engine	2	10			38		
Hold fans	2	0,75			3,6		
" "	2	1			4,15		
Windlass	1	57			208		

REMAINING CABLES AS PER PLANS ATTACHED.

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 _____

COMPASSES.

Minimum distance between electric generators or motors and standard compass 12 m.

Minimum distance between electric generators or motors and steering compass 10 m.

The nearest cables to the compasses are as follows:—

A cable carrying 0.1 Ampères 0.2 m. ~~YXX~~ from standard compass 0.2 m. ~~YXX~~ 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 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 — 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 —

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

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 installations of this vessel was originally fitted under the special supervision of the Surveyors to the American Bureau of Shipping and classed with that Society but have now been surveyed and tested by me for Classification with this Society.

The condition and standard of workmanship, as now seen, is considered to be good and satisfactory.

Total Capacity of Generators 515 Kilowatts.

The amount of Fee ... Kr. x 600: : When applied for, 13/3 19.48

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

T. O. O'Connell
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

Assigned *see H. R. M.*

5th. 1.16. — Transfer. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below this space for Committee's Minute.)



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