

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in feet.	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area of Conductor sq. ins. or sq. mm.	In the Circuit.	Rule.			
Incandescent	1	6	6	28	44	Rubber	Lead covered & armoured.
Navigational lights	1	6	3	28	210	"	"
Main head lights	1	1.5	0.4	7	max. 160	"	"
Side lights	1	1.5	0.4	7	36	"	"
Port light	1	1.5	0.4	7	240	"	"
Starboard light	1	1.5	0.4	7	24	"	"
Compass lights	1	1.5	0.4	7	max. 324	"	"
Water heaters	1	16	26	48	324	"	"
"	1	6	20	28	17	"	"
Heaters for washing machine	1	16	41	48	9	"	"
Radios (cables fitted only)	1	10		38	124	"	"
Empire	1	2.5	6	13	8	"	"

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position yes

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 yes if so, how are they protected Cables lead in gas tight tubing & lamps contained in flameproof fittings and where are the controlling switches fitted intrinsically outside these spaces Are all fittings suitably ventilated yes

Searchlight Lamps, No. of yes, whether fixed or portable yes, are they of the carbon arc or of the filament type 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 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 L.K. & N.E.S. 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 make Marconi S.D. Co. Ltd. location of transmitter in fwd. deep tanks at front end of fwd. cofferdam and receiver in fwd. deep tanks at front end of fwd. cofferdam

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	ORCAV	150	230	652	350	MAN. 94 V42	Holzer & Co. Ltd. V.G. Co.
Harbour	1	G.E.C.	40	230	174	525	Steam eng.	W. Simpson & Co. Ltd.
EMERGENCY ROTARY TRANSFORMER		Thomas A. Spriggs	30	110	261	1400	26. motor	Thomas A. Spriggs

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 of Conductor sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	150	3	185	652	699		Rubber	Lead covered & armoured.
" EQUALISER		6	185					
Harbour	40	1	120	174	174		"	"
EMERGENCY GENERATOR	34	1	120	170	174			
ROTARY TRANSFORMER: MOTOR	30	1	240	261	270			

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

DESCRIPTION.	No. in Parallel per Pole.	Sectional Area of Conductor sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
B1a.	1	50	63.5	98	Rubber	Lead covered & armoured.
B1b, B2, B3.	1	25	max. 54.5	63	"	"
B1c.	1	4	10	21	"	"
B4.	1	10	41	38	"	"
B5a, B5b.	1	2.5	max. 7	13	"	"
B1.	1	185	133	233	"	"
C2.	1	35	73	78	"	"
C3.	1	16	40	48	"	"
C4, C5.	1	70	max. 113	128	"	"
C1.	1	95	72	150	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return) in feet.	INSULATION.	PROTECTIVE COVERING.
Bridge pumps.	1	8	10	32	38	Rubber	Lead covered & armoured.
Trice pumps.	1	21	35	79	79	"	"
Circ. sea water pumps	2	41	120	151	174	max. 624	"
" fresh "	2	33	70	126	128	81	"
Circ. sea & fresh water pumps for aux. eng.	1	11	16	43.5	48	30	"
Lubricating oil pumps	2	46	120	172	174	max. 85	"
Compass winding gear.	1	16	25	64	64	70	"
Oil fuel transfer pumps	1	5	4	20	21	11	"
Cool pumps for fuel motor	2	1	1.5	4.5	7	16	"
Water oil separator.	1	7.7	10	30.3	38	224	"
" "	1	4	4	16.5	21	43	"
Raft compressor	1	4.8	6	19	28	56	"
Hydrophore pumps	2	21	2.5	8.1	13	max. 20	"
Flaring gear	2	24.5	50	93	99	124	"
Light blocks	1	6.45	6	30	30	35	"
Circ. pump for alk. gas econom.	1	1.5	2.5	6.5	13	15	"
Lathes	1	5	4	20	21	52	"
Drilling machines	1	1.8	2.5	7.65	13	121	"
Grinding "	1	1.5	2.5	6.4	13	28	"

The Electrical Equipment is installed in accordance with the approved plans and the requirements.

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.

*Nils E. Bruning*

Electrical Contractors.

Date: 27<sup>th</sup> Oct. 1949.

COMPASSES.

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

*KOCKUMS  
MEKANISKA VERKSTADS AKTIEBOLAG  
Torbjörn Lund*

Builder's Signature.

Date: 27<sup>th</sup> Oct. 1949.

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. *No* If not, state date of approval. 15.8.1949.

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith. *Yes*

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

The above described electrical equipments installations have been fitted onboard under survey in accordance with the Rules, approved plans and instructions.

The workmanship and the materials are good.

Recommended: - A spare motor generator of 30 KW, 220/110 Volt to be placed onboard before the end of October, 1950.

*Noted 02-11-49*

Total Capacity of Generators *340* Kilowatts.

The amount of Fee *Mr. 1408:-* When applied for, *28-10-49*  
*Skm. " 352:-*

Travelling Expenses (if any) *Mr. 42.40* When received, *19*  
*Skm.*

Committee's Minute

Assigned *In uniki see J.E. Rpl-*

*A. Böving*  
Surveyor to Lloyd's Register of Shipping.

2 m. 9. 46. - Transfer. (MADE AND PRINTED IN ENGLAND.)  
(The Surveyors are requested not to write on or below the space for Committee's Minutes.)



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# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office 31 OCT 1949

Date of writing Report 26<sup>th</sup> Oct. 1949. When handed in at Local Office 28<sup>th</sup> Oct. 1949. Port of Malmö

No. in Survey held at Malmö Date, First Survey 15<sup>th</sup> Aug. Last Survey 18<sup>th</sup> Oct. 1949. (No. of Visits 26)

Reg. Book No. 40043 on the M/T "VENUS" Tons { Gross 10.606 Net 6.205

Built at Malmö By whom built Kockumns M. V. A. B. Yard No. 345 When built 1949

Owners Rederi A. B. Nordstjernan Port belonging to Stockholm

Installation fitted by Kockumns Mekan. Verkstads A.-B. When fitted 1949

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

Plans, have they been submitted and approved yes System of Distribution Two wire Voltage of Lighting 110

Heating 110 & 220 Power 220 D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency 50

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 yes Generators, are they compound wound yes, and level compounded under working conditions yes

if not compound wound state distance between generators yes and from switchboard yes Are the generators arranged to run in parallel yes, 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 yes Have certificates of test for machines under 100 kw. been supplied yes and the results found as per Rule yes

Position of Generators Main - One on each side in eng. room. Harbour steam driven - One on platform at port 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 One on platform at port side of engine room.

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 Main - Steel, 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 yes

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 circuit breaker with overhead and reverse current trips and a single pole equaliser switch

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

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule yes Instruments on main switchboard 8

ammeters 3 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reversed current protection devices connected on the pole opposite to the equaliser connection yes Earth Testing, state means provided Ohm meters

Switches, Circuit Breakers and Fuses, are they as per Rule yes, are the fuses an Approved Type yes, make of fuses L.K. & NES, are all fuses labelled yes If circuit breakers are provided for the generators, at what overload do they operate Main - 730 A. Harbour - 195 A. and at what current do the reversed current protective devices operate Main - 75-80 A. Harbour - 25 A.

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 yes, state maximum fall of pressure between bus bars and any point under maximum load Less than allowed in R.C. 20. 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 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 any cables laid under machines or floorplates yes, if so, are they adequately protected yes Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit yes

of the "HR" type yes State how the cables are supported or protected Supported by metal clips.

Protected where necessary yes

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 yes Refrigerated chambers, are the cables and fittings as per Rule yes