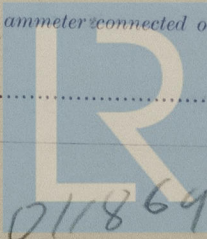


Report on Electrical Equipment.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Writing Report 5.1. 1952 When handed in at Local Office 14.1. 1952. Port of Gothenburg
 Received at London Office
 Survey held at Gothenburg Date, First Survey 8.10. Last Survey 21.12. 1951.
 (Number of Visits 27.)
 on the Motor Tanker "S H E T L A N D" Tons { Gross 10560
 Net 6170
 at Gothenburg By whom built AB. Lindholmens Varv Yard No. 1017 When built 1951.
 A/S Det Dansk-Franske Dampskibsselskab Port belonging to Copenhagen
 Electrical Installation fitted by AB. Lindholmens Varv Contract No. - When fitted 1951.
 Vessel fitted for carrying Petroleum in bulk yes Is vessel equipped with D.F. yes E.S.D. yes Gy. C. yes Radar yes
 Plans been submitted and approved yes System of Distribution Two wire Voltage of supply for Lighting 115
 Power 230 Direct or Alternating Current, Lighting DC Power DC If Alternating Current state frequency - Prime Movers,
 governing been tested and found efficient when the whole load is suddenly thrown on and off yes Are turbine emergency governors fitted with a
 switch as per Rule - Generators, are they compound wound yes are they level compounded under working conditions yes
 compound wound state distance between generators - and from switchboard - Where more than one generator is fitted are they
 d 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
 machines under 100 kw. been supplied yes and the results found as per rule yes Are the lubricating arrangements and the construction
 generators as per rule yes Position of Generators 2 x 140 KW on starboard, 1 x 140 KW on port side
 E R floor is the ventilation in way of generators satisfactory yes are they clear of inflammable material yes if situated
 KW on a platform on port side
 KW on port side in the ER floor
 protected combustible material state distance from same horizontally - and vertically - are the generators protected from mechanical
 and damage from water, steam and oil yes are the bedplates and frames earthed yes and the prime movers and generators in metallic
 yes Switchboards, where are main switchboards placed On a platform at the forward end in the E.R.
 in accessible positions, free from inflammable gases and acid fumes yes are they protected from mechanical injury and damage from water, steam
 yes if situated near unprotected combustible material state distance from same horizontally - and vertically - what insulation
 is used for the panels Mica if of synthetic insulating material is it an Approved Type - if of
 insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule - Is the frame effectually earthed yes
 construction as per Rule yes including accessibility of parts yes absence of fuses on the back of the board yes individual fuses
 and earth lamps, voltmeters, etc., yes locking of screws and nuts yes labelling of apparatus and fuses yes fuses on the "dead"
 itches yes Description of Main Switchgear for each generator and arrangement of equaliser switches A double pole linked
 it breaker with overload and reversed current trips and a single pole equaliser switch
 each outgoing circuit A double pole switch and a fuse on each pole
 Instruments on main switchboard 9
 6 voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
 connection yes Earth Testing, state means provided Ohm-meters



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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 are the reversed current protection devices connected on the pole opposite to the equaliser connection yes have they been tested under working conditions 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 Below Rule state maximum fall of pressure between bus bars and any point under maximum load permit are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes Are paper insulated and varnished cambric insulated cables sealed at the exposed ends yes with insulating compound - 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 - Are cables in machinery spaces, galleys, laundries, etc., lead covered yes or run in conduit - State how the cables are supported and protected Supported by metal clips, cables lead covered and armoured or steel wire braided. Behind panels run in conduits. Are all lead sheaths, armouring 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 Lead Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule yes Emergency Supply, state position In a separate well ventilated compartment on poop deck and method of control automatic 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 - are they adequately ventilated - 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 yes if so, how are they protected flameproof fitting and where are the controlling switches fitted Out side the compartment are all fittings suitably ventilated yes are all fittings and accessories constructed and installed as per Rule yes Searchlight Lamps, No. of 1 whether fixed or portable portable 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 - 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 - 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 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 the cartridge type yes are they of an approved type yes 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	3	140	230	610	450	Heavy oil engine	Diesel oil	Above 150° F
	1	40	230	174	600	Steam engine		
	1	30	230	131	1000	Heavy oil engine	Diesel oil	Above 150° F
EMERGENCY ... ROTARY TRANSFORMER	2	33	115	287	1400	Electric motor		

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 sq. mm.	In the Circuit	Rule			
MAIN GENERATOR	140	3	95	610	726	18-18-26	Paper	Lead covered and arm.
" " EQUALISER	---	3	95	---	726	---	---	---
Steam driven generator	40	1	70	174	200	12	---	---
Equaliser	---	1	70	---	200	---	---	---
Harbour light generator	30	1	50	131	159	16	---	---
Equaliser	---	1	50	---	159	---	---	---
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR	50 BHP	1	70	185	200	16-18	---	---
" " GENERATOR	33 KW	2	50	287	318	---	---	---

MAIN DISTRIBUTION CABLES.

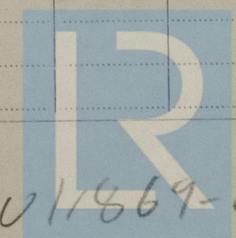
AUX. SWITCHBOARDS AND SECTION BOARDS ...									
Power Section	Broad No.	I.	1	50	32 ✓	99	5	Rubber	Lead covered and arm.
- " -		II.	1	70	99.0	125	38	-"-	- " -
- " -		III.	1	70	184 ✓	200	70	Paper	- " -
- " -		IV.	1	70	184 ✓	200	75	-"-	- " -
- " -		V.	1	70	190 ✓	200	75	-"-	- " -
- " -		VI.	1	10	24 ✓	38	42	Rubber	- " -
- " -		VII.	1	50	92 ✓	99	140	-"-	- " -

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	1	10	--	38	150	Rubber	---
NAVIGATION LIGHTS	1	2.5	3	13	150	---	---
LIGHTING AND HEATING							
Distribution board I (Engine room)	1	16	37	48	4	---	---
" " II (Crew acc. p.s.)	1	25	25	63	80	---	---
" " III (" " s.s.)	1	25	25	63	30	---	---
" " IV (Eng. acc. p.s.)	1	25	35	63	40	---	---
" " V (" " s.s.)	1	25	30	63	60	---	---
" " VI (Lower bridge acc.)	1	70	47	125	140	---	---
" " VII (Officers acc.)	1	70	45	125	150	---	---
" " VIII (Forecastle)	1	16	20	48	290	---	---

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE EXAMINED.	No.	B.H.P.						
Main salt/fresh water circulating pumps	2	37	1	50	148	159	18	Paper Lead covered and arm.
Main salt and fresh water spare pump	1	28	1	70	107	125	18	Rubber
Main lubr. oil pumps	2	62	1	120	221	282	14	Paper
Auxiliary engine cooling water pump	2	4.5	1	4	18.2	21	22	Rubber
Bilge pump	1	9	1	16	35.5	48	36	---
Fire pump	1	34	1	50	127.0	159	42	Paper
Transfer pump	1	6	1	6	25.4	29	42	Rubber
Manoeuvre compressors	2	60	1	120	230	282	16	Paper
Cooling pumps for fuel needle valve	2	4.5	1	6	19.5	29	10	Rubber
Turning motor	1	13	1	25	51.0	63	40	---
Emergency compressor	1	2	1	2.5	9.5	13	18	---
Purifiers	3	3.2	1	4	18	21	48	---
Steering engine	2	24	1	50	94	99	78	---



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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.

AKTIEBOLAGET LINDHOLMENS VARV
ELEKTRISKA AVDELNINGEN

Jygge Lefdal

Electrical Engineers. Date 11.1.1952.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 11 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 3 Ampères 6 feet from standard compass 4 feet from steering compass.

A cable carrying 1.5 Ampères 4 feet from standard compass 4 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 0 degrees on every course in the case of the

standard compass, and 0 degrees on every course in the case of the steering compass.

AKTIEBOLAGET LINDHOLMENS VARV
ELEKTRISKA AVDELNINGEN

Jygge Lefdal

Builder's Signature. Date 11.1.1952

Is this installation a ~~repetition~~ similar of a previous case

Yes

If so, state name of vessel

M/T "SLIEDRECHT" L.V. 1013

M/T "MERMA DAN" L.V. 1015

M/T "CHRISTIANSBORG" L.V. 1015

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

This electric installation has been fitted in the vessel under our inspection and has been tested under full power and found satisfactory.

The workmanship is good and all the Rule requirements have ^{BEEN} complied with.

Lloyd's & Makers' certificates in respect of generators and important motors are attached.

Noted ADM 12-2-52

Total Capacity of Generators 490 Kilowatts.

The amount of Fee (4/5) Kr. 1540:—
When applied for, 14/1 19 52
When received
Travelling Expenses (if any) Kr. —
— 19 —

TUES. 19 FEB 1952

Committee's Minute

Assigned

See F. E. moly rpt

Stein Johnson
Surveyor to Lloyd's Register of Shipping



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