

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

27 JAN 1958

Date of writing Report 22/1 1958 When handed in at Local Office 19 Port of Stockholm
No. in Survey held at Stockholm Date, First Survey 9.8.57 Last Survey 13/12 19 57
Reg. Book. (No. of Visits 22)

41731 on the Single Screw Motorship "FREDRIKA" Tons { Gross 2936 Net -
Built at Stockholm By whom built Messrs. A/B Finnboda Varv Yard No. 368 When built 1957
Owners Rederi A/B Fredrika Port belonging to Stockholm
Installation fitted by Messrs. A/B Marinmontage When fitted 1957

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

Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole Negative
Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Yes Position of Generators On port side in E.R.

Port forward inboard and outboard, port aft, harbour light gen. in deckhouse on shelterdeck
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 a platform in forward part of E.R.

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 panels of steel, 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 triple pole circuit breaker with overload and reverse current protection (the third pole for the equaliser) and a fuse on each pole

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

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 6
ammeters 4 voltmeters - synchronising devices For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided

an ohm meter Preference Tripping, state if provided Yes, and tested Yes
Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes

make of fuses I.F.O. & N.E.S. are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 600 A 10 sec. and at what current do the reverse current protective devices operate 70 A 8 sec. Cables, are they insulated and protected ~~xxxxxx~~ Yes

if otherwise than as per Rule are they of an Approved Type Butyl, please see secretary's letter 2.9.55 state maximum fall of pressure between bus bars and any point under maximum load 6 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends None

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 State type of cables (if in conduit this should also be stated) in machinery spaces F.D.O.M. (Butyl), galleys F.D.O.M. & F.D.K.L. and laundries F.D.O.M. & F.D.K.L. State how the cables are supported or protected supported by metal clips, laid on perforated plates, clipped to bulkheads, were necessary led in steel pipes or protected by steel plates

Are all lead sheaths, armouring 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 effectually bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes

Have refrigeration fan motors been constructed under survey Yes and test certificates supplied Yes
Are the motors accessible for maintenance at all times Yes

Handwritten initials and date: 27/2/58

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes. Emergency Supply, state position A D.C. gen. driven by an el. or hand started diesel engine, placed in a deck house on shelter deck.

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, fitted and adequately ventilated as per Rule. -, state battery capacity in ampere hours. -. Where required to do so does it comply with 1948 International Convention. -.

Lighting, is fluorescent lighting fitted. -. If so, state nominal lamp voltage. - and compartments where lamps are fitted. -.

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes.

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

Heating and Cooking, is the general construction as per Rule. -, are the frames effectually earthed. -, are heaters in the accommodation of the convection type. -. 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. None.

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule. Yes. Lighting Conductors, where required are they fitted as per Rule. not required.

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with. -, are all fuses of an Approved Cartridge Type. -, make of fuse. -. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. -. Are all cables lead covered as per Rule. -.

E.S.D., if fitted state maker. Kelvin Hughes location of transmitter and receiver. in forward cofferdam in E.R.

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				TYPE.	PRIME MOVER.	
			Kw. per Generator.	Volts.	Ampères.	Rev. per Min.		MAKER.	MAKER.
MAIN	3	Thomas B. Thrige	130	220	590	600	Diesel	Ruston - Hornsby	
EMERGENCY ROTARY TRANSFORMER	1	"	32	220	139	1000	"	"	"

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return, feet).	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area of CONDUCTOR sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	1	130	4	95	590	600	18	Rubber	Butyl
EQUALISER	1	130	2	95	-	300	9	"	"
	1	130	4	95	590	600	16	"	"
	1	130	4	95	590	600	50	"	"
	1	130	4	95	590	600	25	"	"
EMERGENCY GENERATOR	1	32	1	95	139	150	110	"	"

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area of CONDUCTOR sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return, feet).	INSULATION.	PROTECTIVE COVERING.
From main switchboard to: Auxiliary switchboard	2	70	2	70	250	250	34	Rubber Butyl

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return, feet).	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area of CONDUCTOR sq. mm.	In the Circuit.	Rule.			
From main switchboard to:							
D.F.B. K 4	1	50	97	99	36	Rubber	Butyl
D.F.B. K 8	1	50	84	99	39	"	"
D.F.B. K 3	2	50	200	198	52	"	"
From aux. switchboard to:							
D.F.B. K 2	1	10	31	38	50	"	"
D.F.B. K 10	1	6	26	29	72	"	"
D.F.B. B 5 light on poop	1	6	27	29	52	"	"
From D.F.B. 5 to D.F.B. 5 A	1	2.5	7	15.5	140	"	"
D.F.B. K 7	1	16	45	49	46	"	"
D.F.B. Navigation light	1	1.5	1	9.5	72	"	"
D.F.B. B 2 light in refr. cargo rooms	1	2.5	11	15.5	110	"	"
D.F.B. B 6 " on deck	1	6	25	29	110	"	"
D.F.B. B 3 " " "	1	4	21	22.5	52	"	"
D.F.B. B 4 " " "	1	4	15	22.5	42	"	"
D.F.B. B 7 " " boat deck	1	6	29	29	66	"	"
D.F.B. B 1 " in E.R.	1	6	27	29	12	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	No. in Parallel per Pole.	Sectional Area of CONDUCTOR sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return, feet).	INSULATION.	PROTECTIVE COVERING.
From main switchboard to:								
Refr. cargo compr:s	3	42	2	50	155	198	24	Rubber Butyl
" " fan	1	18	1	68	70	78	133	"
" " "	1	18	1	68	70	78	67	"
Lub. oil pump	2	35	1	95	130	150	52	"
Windlass	1	42	1	95	160	160	163	"
Spare blower for M.E.	1	45	2	50	168	198	53	"
Fuel oil transf. pump	1	10	1	16	40	46	46	"
F.W. & S.W. circ. pump M.E.	3	14	1	25	55	63	40	"
Ballast pump	1	14	1	25	54	63	22	"
Bilge & fire pump	1	10	1	16	40	49	30	"
Start. air compr.	2	32	1	70	120	99	60	"
Steering engine	1	15	1	16	48	49	100	"
" " "	1	15	7	16	48	49	120	"
Ward-Leonard converter, winches	2	41	2	50	272	240	120	"
" " " "	2	41	2	50	272	240	91	"
" " " "	2	41	2	50	272	240	18	"
From D.F.B. K 7 to:								
E.R. fans	2	5.3	1	4	21	22.5	16	"
From D.F.B. K 4 to:								
Circ. pump aux. diesel eng:s	2	5.5	1	4	22	22.5	40	"
" " refr. mchy.	2	4.0	1	4	16	22.5	10	"
From D.F.B. k 8 to:								
Cargo hold fan	3	2.5	1	2.5	9.7	15.5	150	"
" " "	6	2.5	1	2.5	9.7	15.5	146	"
" " "	2	2.5	1	2.5	9.7	15.5	136	"
From D.F.B. K 3 to:								
Purifier	3	3.0	1	2.5	10.3	15.5	19	"
Oil heater	3	-	2	25	55	63	16	"
From aux. switchboard to:								
Fire pump in shaft tunnel	1	13.6	1	25	53	63	156	"
Fan in harbour light eng. room								
From D.F.B. K 2 to:								
Emerg. start air compr.	1	5	1	4	20	22.5	40	"

NOTE.—Use Rpt. 13 Continuation Sheet if the above space is insufficient.

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.

Eng. Ja Hain-Montage A.B. Ahlin Electrical Contractors. Date 15.1.58
A Wingård

COMPASSES.

Have the compasses been adjusted under working conditions Yes

AKTIEBOLAGET FINNBODA VARF

ERIK OLIN

Erik Olin

Builder's Signature. Date 18-1-1958

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

Is this installation a duplicate of a previous case Yes If so, state name of vessel M/S "SVENSKSUND"

Plans. Are approved plans forwarded herewith No If not, state date of approval 13.12.56 & 18.1.57

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The electrical installation of this vessel has been installed under Special Survey in accordance with approved plans.

The workmanship and materials are good.

The installation has been tested under working condition and found in order.

Total Capacity of Generators 422 Kilowatts.

The amount of Fees ... kr. 1,740:-- When applied for,

17/1 19 58

When received,

19

Travelling Expenses (if any) £

M. Lund
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUESDAY - 4 MAR 1958

Assigned See Rpt. 1.

5m. 658 - Transfer. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to sign or below the space for Committee Minutes.)

31-1-58



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