

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

24 MAR 1958

Date of writing Report 5/3 19 58. When handed in at Local Office 22/3 19 58. Port of GOTHEBURG.

No. in Survey held at GOTHEBURG. Date, First Survey 19/12-57. Last Survey 11/3 19 58. (No. of Visits 26.)

Reg. Book.

6/42573 on the M/S "MELINE" Tons Gross 13,405 Net 7,898

Built at Gothenburg. By whom built A.-B. Götaverken Yard No. 716 When built 3-1958.

Owners A/S Tanktransport Port belonging to Tönsberg.

Installation fitted by A.-B. Götaverken, Gothenburg. When fitted 3-1958.

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. --- Radar Yes.

Plans, have they been submitted and approved Yes. System of Distribution 3-phase installed. Voltage of Lighting 110

Heating 110 & 220 Power 440 D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 c/s

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 ---, and level compounded under working conditions ---

Are the generators arranged to run in parallel Yes. Is the compound winding connected to the negative or positive pole ---

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 2x565 KVA on a platform

starboard side of Engine Room; 1x235 KVA on starboard side of ER floor forward.

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 same platform as

565 KVA generators, viz:- Platform starboard 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 Dead front switchboard, 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. 3-pole circuit breaker with overload, reverse and under voltage release. 3-pole hand operated isolating switch, double pole field excitation circuit breaker with fault release.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit. 3-pole switch and triple pole fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes. Instruments on main switchboard 34.

ammeters 7 voltmeters 1 synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection --- Earth Testing, state means provided Ohm-meter.

Preference Tripping, state if provided ---, and tested ---

Switches, Circuit Breakers and Fuses, are they as per Rule Yes. are the fuses an Approved Type Yes.

make of fuses ASEA, are all fuses labelled Yes. If circuit breakers are provided for the generators, at what overload do they operate 15-20% and at what current do the reverse current protective-

devices operate 10% 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 --- volts. 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 Yes. if so, are they adequately protected Yes. State

type of cables (if in conduit this should also be stated) in machinery spaces LC&A or steel wire braided cables LC & A, LC & SWB and laundries LC & SWB State how the cables are supported or protected Supported by metal clips. All

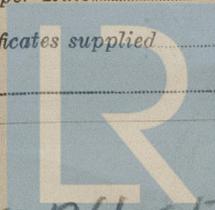
power cables LC & A or LC & SWB. Lighting cables in accomodation etc. LC & PVC even where drawn behind panels.

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.

Have refrigeration fan motors been constructed under survey --- and test certificates supplied ---

Are the motors accessible for maintenance at all times ---



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

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 Yes. If so, state nominal lamp voltage 110 and compartments where lamps are fitted. Engine Room, Boiler Room, Mess Roms, Galley, Corridors etc.

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. Fixed, are they of the carbon arc or of the filament type. Filament.

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 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.

Lightning Conductors, where required are they fitted as per Rule. ---

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. Yes., are all fuses of an Approved Cartridge Type. Yes., make of fuse. ASEA. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. Yes. Are all cables lead covered as per Rule. Yes.

E.S.D., if fitted state maker. Kelvin Hughes location of transmitter and receiver. ER. 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.	KVA XXX per Generator.	RATED AT			PRIME MOVER.	
				Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	ASEA	565	450	725	1200	Turbines	De-Laval, Stockholm.
	1	ASEA	235	450	302	327	Oil Eng.	Jönköpings Motorfabrik
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	No. of	KVA XXX	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in ft.	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	2	565	7	95	725	735	30	Rubber	LC & A.
" " EQUALISER	1	235	3	95	302	315	20	"	LC & A.
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

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

DESCRIPTION.	No. of	KVA XXX	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) in ft.	INSULATION.	PROTECTIVE COVERING.
Gyropilot 440 volt D.B.	1	2.5	1	13	13	100	Rubber	LC. and A.	
Gyropilot 440 volt D.B.	1	2.5	1	13	13	100	"	"	
Laundry D.B.	1	4	11	16	16	80	"	"	
Refrigeration D.B.	1	35	45	55	160	80	"	"	
Galley 440 volt D.B.	1	4	5.5	16	80	80	"	"	
Galley 220 volt D.B.	2	50	135	138	100	100	"	"	
Accommodation fans D.B.	1	16	28	33	60	60	"	"	
Engine Room fans D.B.	1	95	74	105	100	100	"	"	
Radar 110 volt D.B.	1	6	10	21	120	120	"	"	
Air Condition D.B.	1	70	42	87	100	100	"	"	
Gyrocompass D.B.	1	10	10	27	100	100	"	"	
Shore connection D.B.	2	95	197	210	80	80	"	"	
Salt water ind. D.B.	1	10	13	27	40	40	"	"	

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

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in ft.	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.			
Wireless	1	2.5	8	15.5 13.0	100	Rubber	L.C. and A.
Lighting:-							
Poop deck forward	1	25	21	44	100	"	"
Poop deck aft	1	25	13	44	100	"	"
Bridge aft	1	25	24	44	100	"	"
Deck, starboard	1	35	22	55	100	"	"
Deck, port	1	35	22	55	100	"	"
Boat deck	1	16	33	33	100	"	"
Engine Room and Boiler Room	1	35	50	55	30	"	"
Bridge, forward	1	25	20	44	100	"	"
Navigation lights	1	2.5	2	13	120	"	"
Pumproom	1	25	22	44	220	"	"
Forecastle	1	6	10	21	120	"	"
Suez searchlight	1	35	16	55	400	"	"
Transformers:-							
440/220 30 KVA Primary (2 off)	1	35	38.5	55	30	"	"
Secondary	1	70	75.5	87	30	"	"
440/110 30 KVA Primary (2 off)	1	35	38.5	55	30	"	"
Secondary	2	70	151	174	30	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	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) in ft.	INSULATION.	PROTECTIVE COVERING.
Condition circulating pump	1	130	2	70	165	174	50	Rubber	LC. and A.
Condition circulating pump	1	45	1	50	61	69	50	"	"
Lubricating oil pumps	2	20	1	10	26	27	70-70	"	"
Ballast pump	1	37	1	25	40	44	70	"	"
Bilge pump	1	11	1	4	14	16	40	"	"
Feed pump	1	35	1	25	40	44	50	"	"
Fire- and tank wash pumps	2	35	1	25	41	44	30-30	"	"
Condensate pumps	2	23	1	16	30	33	50-50	"	"
Drain pumps	2	5	1	2.5	6.6	13	20-20	"	"
Auxiliary cond. pump	1	23	1	16	27	33	40	"	"
Evaporator cooling pumps	2	11	1	6	14	21	20-20	"	"
Feed water transfer pump	1	3	1	1.5	4.2	7	20	"	"
Fresh water cooling pump	1	3.5	1	1.5	5.2	7	20	"	"
Salt water cooling pump	1	5.5	1	2.5	8	13	20	"	"
Oil burning unit	2	7	1	4	9.2	16	40-40	"	"
Light. up o.b. unit	1	1	1	1.5	1.6	7	40	"	"
Compressors	2	24	1	25	31.5	44	60	"	"
Compressor	1	3.7	1	2.5	5.5	13	20	"	"
Refr. compressor. Air cond.	1	45	1	50	61	69	60	"	"
Refr. compressor. Provision.	2	8	1	4	10.5	16	20-20	"	"
Diesel oil transfer pump	1	6	1	2.5	7.6	13	20	"	"
Forced draught fans	2	65	1	70	79	87	80-80	"	"
Engine- & boiler room fans	6	7.5	1	4	9.5	16	6x60	"	"
Steering gear	2	25	1	25	34	44	160-160	"	"
Turning gear	1	3	1	2.5	7.2	13	20	"	"

NOTE.—Use Rpt. 43 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.

ARTIEBOLAGET GÖTAVERKEN

Nils Brundin

Electrical Contractors.

Date 13th March, 1958

COMPASSES.

Have the compasses been adjusted under working conditions.

ARTIEBOLAGET GÖTAVERKEN

Nils Brundin

Builder's Signature.

Date 13th March, 1958

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 Gothenburg 6.12.57.

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.)

This electric installation has been fitted in accordance with the Rules and approved plans, under my inspection and to my satisfaction.

The workmanship and material used are good.

Generators and the motor above 100 BHP have been built under Special Survey as per certificates attached.

NOTE:-

Part of the survey carried out at the Builder's request by B. Jönsson on Saturday 22nd February, 1958, between 15³⁰ and 17³⁰.

Total Capacity of Generators 1365 KVA

The amount of Fee (Got) ..K£.	2.800:-	When applied for,
(Skm) Kr.	700:-	22/3 19 58.
Late Fee (Got) Kr.	70:-	
(Skm) Kr.		When received,
Travelling Expenses (if any) K£.	16:-	19

B. Jönsson
Surveyor to Lloyd's Register of Shipping.

TUESDAY - 6 MAY 1958

Committee's Minute

Assigned See Rpt. 1.