

22 FEB 1956

Rpt. 13.

No. 22160

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 9th Feb., 1956 When handed in at Local Office 20th Febr., 1956 Port of Gothenburg

No. in Survey held at Gothenburg Date, First Survey 9.11.1955 Last Survey 8.2.1956
Reg. Book. (No. of Visits 32)

34885 on the Motorship "A R J E P L O G" Tons Gross 10805

Built at Gothenburg By whom built AB. Götaverken Yard No. 711 When built 1956

Owners Trafik AB. Grängesberg-Oxelösund Port belonging to Stockholm

Installation fitted by AB. Götaverken When fitted 1955-56

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 2 wires Voltage of Lighting 220

Heating 220 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 All placed in parallel on a

platform aft.

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 on port side

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 A double link circuit breaker with overload & reversed current

trip and a single pole equaliser switch intelocked with the circuit breaker.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit A double pole 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 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 Ohm meters

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 ASEA, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 20% overload, and at what current do the reverse current protective

devices operate 10 - 15% 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 Below Rule permit 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, LC&SWB, galleys LC&A, LC&PVC

and laundries LC & PVC State how the cables are supported or protected Supported by metal clips.

All power cables lead covered & armoured or steel wire braided. Lighting cables in accomodations LC & PVC

where drawn behind panels run in conduits.

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

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 ---



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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. --- 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. ---, whether fixed or portable. ---, are they of the carbon arc or of the filament type. ---

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. ---, 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. built in recess aft in pipe tunnel

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.	
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	3	E S A B	165	220	750	350	Diesel	AB. Götaverken <i>used</i>
	1	"	60	220	272	1100	"	Ad. Strürer G.m.b.H., Hamburg <i>boyl</i>
EMERGENCY ...								
ROTARY TRANSFORMER								

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 or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	3	165	4	150	750	820	50-45-40	Rubber	Lead covered & armoured
" EQUALISER ...			4				50-45-40	"	"
Habour lighting generator	1	60	2	95	272	300	30	"	"
			2				30	"	"
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER: MOTOR ...									
" GENERATOR...									

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

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Hydrofor pump	1	50	1	50	83	99	Rubber	Lead covered & armoured
Refr. installation (Provision)	1	16	1	16	40	49	"	"
Purifies lubricating oil	1	16	1	16	44	49	"	"
Work shops	1	6	1	6	17	29	"	"
Low pressure pumps and ME injections and valve cooling pumps	1	16	1	16	31	49	"	"
Tricolor evaporator	1	10	1	10	33	38	"	"
Purifies fuel oil	1	70	1	70	107	125	"	"
Galley	1	150	1	150	160	205	"	"
Acc. fans and circulating pumps for ventil.	1	50	1	50	57	99	"	"
ER fans	1	35	1	35	52	78	"	"
Laundry	1	16	1	16	43	49	"	"
Motors for hydr. hatch gear	1	16	1	16	50	49	"	"

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.). 22 FEB 1956

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	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	10	20	38	120	Rubber	Lead covered & armoured
Gyro & radar	1	16	20	49	120	"	"
BIA Cargo lights aft	1	1.5	4.5	9.5	30	"	"
BIB Heating in stores room	1	1.5	4.5	9.5	20	"	"
BIC Loading lights amidship	1	4	10	22.5	150	"	"
BII Crew accommodation	1	10	24	38	100	"	"
BIII Officers accommodation	1	16	34	49	80	"	"
BIV Bridge	1	10	26	38	100	"	"
BV "	1	1.5	1	9.5	120	"	"
BVI Forward	1	25	14	63	300	"	"
BVII Engine Room	1	10	33	38	20	"	"

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.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
Bilge pump	1	14	1	25	53	63	Rubber	Lead covered & armoured
"	1	17	1	35	65	78	"	"
Bilge and ballast pump	1	43	1	120	159	175	"	"
Ballast pumps	2	72	2	95	263	300	"	"
Main starting air comp.	2	60	1	185	223	235	"	"
" circulating pumps	2	54	1	150	198	205	"	"
Hot water circulating pump	1	2.5	1	2.5	10.4	15.5	"	"
Main lubricating oil pumps	2	45	1	120	167	175	"	"
Fire and sanitary pumps	2	30	1	70	114	125	"	"
Hydrofor pumps	2	2.1	1	2.5	9.1	15.5	"	"
Purifies heavy fuel oil	2	7.7	1	10	30	38	"	"
" " " " "	1	15	1	25	58	63	"	"
Transfer pumps heavy fuel oil	1	16	1	25	60	63	"	"
" " " " "	1	3.5	1	4	14.7	22.5	"	"
Turning motor	1	10	1	16	42	49	"	"
ME Low pressure pump	1	2.1	1	2.5	8.8	15.5	"	"
Purifies lubricating oil	2	3.5	1	4	14.8	22.5	"	"
Aux. engine cooling water pump	1	9	1	10	34	38	"	"
Injection valves cooling w. pumps	2	1.8	1	1.5	7.7	9.5	"	"
Steering gear	2	15	2	25	62	63	"	"
Warping winches	2	50	1	120	195	230	"	"
Windlass	1	70	1	185	258	275	"	"
Pumps for hydr. hatch gear	2	12	1	16	44.5	49	"	"
Winches on boat deck	2	16	1	50	64	99	"	"

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.

AKTIEBLAGET GÖTAVERKEN

Electrical Contractors.

Date 11th Febr. 1956

Wimpy

COMPASSES.

Have the compasses been adjusted under working conditions.

AKTIEBLAGET GÖTAVERKEN

Builder's Signature.

Date 11th Febr. 1956

Wimpy

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 "ABISKO" AB. Götaverkens Yard No. 710.

Plans. Are approved plans forwarded herewith. No. If not, state date of approval 6.9.55.

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 under my inspection and to my satisfaction in accordance with the Rules and approved plans.

The workmanship and material used are good. Generators above 100 kW have been built under Special Survey as per certificates attached.

The installation has been examined under working condition on a trial trip and found satisfactory.

Total Capacity of Generators 555 Kilowatts.

The amount of Fee ... Kr. 2080:00 When applied for, 20.2. 1956.

Travelling Expenses (if any) Kr. 108:00 When received, --- 19---

Edvard Jansson
Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUESDAY 20 MAR 1956

Assigned *See Rpt 48.*

2m.455 - Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minutes.)



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