

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Date of writing Report 18th Dec., 1964 When handed in at Local Office 19 Received at London Office 22 MAR 1965

No. in Survey held at Sasebo, Japan Date, First Survey 24th Oct., 1964 Port of Nagasaki (Sasebo) Last Survey 30th Nov., 1964

Reg. Book on the Single Screw Steam Tanker "Australian Progress" (No. of Visits 9) Tons { Gross 9898 Net

Built at Hamburg, Germany By whom built Schlieker-Werftwilly H. Yard No. 525 When built 1960

Owners Mobil Shipping Co., Ltd., London Port belonging to Melbourne, Australia

Installation fitted by Schlieker-Werftwilly H. Schlieker K.G. Hamburg, Germany When fitted 1960

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 Yes

Plans, have they been submitted and approved Yes System of Distribution 3 phase 3 wire Voltage of Lighting 115 V

Heating 220V&240V Power 440 V D.C. or A.C. Lighting A.C. Power A.C. If A.C. state frequency 60C/S&50C/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 - 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 - Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule -

Position of Generators Main Generators: Starb'd Outb'd & Inb'd on upper flat in Engine Room Em'cy Generator: Em'cy Generator Room on Boat deck

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 Starb'd For'd on upper flat in 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 Construction (Synthetic Resin), 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 Triple Pole Circuit Breaker provided with overload, undervoltage and reverse power protective device

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Triple pole "No-Fuse" Breaker

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 7

ammeters 3 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 Earth Leakage Indication with pilot lamps Preference Tripping, state if provided Yes, and tested Yes

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

make of fuses American Cartridge, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 755 A

and at what current do the reverse current protective devices operate Approx. 60A Cables, are they insulated and protected as per Rule -

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 440V; 10.9 volts

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

State type of cables (if in conduit this should also be stated) in machinery spaces * VC, RYC & RLC, galleys * VC & RYC

and laundries * VC & RYC State how the cables are supported or protected Generally secured by metal clips to perforated steel plate or steel hangers. Cable on the fore gangway run in steel pipe

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 -

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 -

VC: Varnished Cambric, Lead Sheathed and Steel Wire Braided Cable.
RYC: Heat Resisting Rubber Insulated, Polyvinylchloride Sheathed and Steel Wire Braided Cable.
RLC: Heat Resisting Rubber Insulated, Lead Sheathed and Steel Wire Braided Cable.



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Distributed in Engine & Boiler Rm., Accommodation Passage, Boat Deck & Compass Room.

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 Yes, state battery capacity in ampere hours 24V 360AH 2 sets Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted No 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 No 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 -

Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule -

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 -, make of fuse American Cartridge 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 ATLAS W. location of transmitter and receiver Frame 44/45 in Engine Room

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	Revs. per Min.		
MAIN	2	Siemens-Schuckertwerke A.G.	400	450	640	1200	Turbine driven	Siemens-Schuckertwerke A.G.
EMERGENCY ROTARY TRANSFORMER	1	Siemens-Schuckertwerke A.G.	150	450	240	1200	Diesel driven	Motorenwerke Mannheim A.G.

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. mm. or sq. mm.	In the Circuit	Rule			
MAIN GENERATOR	2	400	4	95	640	700	10	V	LC
" " EQUALISER									
EMERGENCY GENERATOR	1	150	3	70	240	435	10	V	LC
ROTARY TRANSFORMER: MOTOR	1	19	1	14	32	50	40	R	YC
" " GENERATOR	1	16	1	22	48	66	1	R	YC

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

DESCRIPTION	No. of	Kw.	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
			No. in Parallel per Pole	In the Circuit	Rule		
MSB to Boiler Plant	1	95	171	175	140	V	LC
" to Emergency Switch Board	1	10	44	44	40	V	LC
" to Transformer for Lighting(Prim'y)	1	35	88.7	94	10	V	LC
" to Shore Connection Box	1	95	170	175	30	V	LC
" to Transformer for Lighting(Second'y)	3	50	339.2	345	5	V	LC
ESB to Transformer for Emc'y Lighting(Prim'y)	1	4	18.4	24	5	V	LC
" to - Do - (Second'y)	1	25	70.3	77	5	V	LC

* Insulation

V: Varnished Cambric
R: Heat Resisting Rubber

* Protective Covering

LC: Lead Sheathed and Steel Braided
YC: Polyvinylchloride Sheathed and Steel Wire Braided

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

DESCRIPTION	No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands sq. mm. or sq. mm.	MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
			In the Circuit	Rule			
MSB to Boiler Plant Dist. Bd. DB15	1	4	12.6	24	40	V	LC
MSB to Ship's Fan & Air Con. Dist. Bd. DB2	1	95	85.4	175	40	V	LC
MSB to Ship's Fan & Air Con. Dist. Bd. DB2A	1	95	68	175	20	V	LC
MSB to Engine Rm. & Boiler Rm. Dist. Bd. DB5	1	50	41	115	30	V	LC
MSB to Catering Appliance Dist. Bd. DB7A	1	35	70	94	70	V	LC
MSB to Deck Machinery Dist. Bd. DB10	1	16	53	58	20	V	LC
MSB to Evaporator Plant Dist. Bd. DB13	1	4	18	24	30	V	LC
MSB to Work Shop Dist. Bd. DB17	1	6	17	31	20	V	LC
MSB to Sanitary Plant Dist. Bd. DB18	1	4	9	24	30	V	LC
MSB to Lighting Dist. (Boat Deck) DB 1	1	25	70	77	70	V	LC
MSB to - Do - (Prom. Deck) DB 3	1	4	17.5	24	40	V	LC
MSB to - Do - (Prom. Deck) DB 4	1	6	20	31	40	V	LC
MSB to - Do - (Main Deck) DB11	1	10	20	44	30	V	LC
MSB to - Do - (Poop Deck) DB 6	1	10	23	44	40	V	LC
MSB to - Do - (Main Deck) DB12	1	25	29	77	40	V	LC
MSB to - Do - (Poop Deck) DB 8	1	25	27	77	40	V	LC
MSB to - Do - (Eng. Rm.) DB14	1	10	37	44	20	V	LC
MSB to - Do - (Boiler Rm.) DB16	1	4	13.5	24	40	V	LC
MSB to Cold Store Plant Dist. Bd. DB19	1	6	24	31	52	V	LC
MSB to Small Power Dist. Bd. DB20	1	22	39	66	25	R	YC
MSB to Control Panel for 20 KVA MG	1	14	34	50	37	R	YC
ESB to Navigation Light Indicator	1	2.5	2.2	17	30	R	LC
ESB to Em'y Lighting Dist. Box (Boat Deck) DB 1A	1	4	22	24	10	V	LC
ESB to - Do - (Poop Deck) DB 8	1	2.5	7	17	20	R	LC
ESB to - Do - (Forecastle Deck) DB 9	1	16	23	58	120	V	LC
ESB to - Do - (Eng. Rm.) DB14	1	2.5	7	17	30	R	LC
ESB to - Do - (Blr. Rm.) DB16	1	2.5	4	17	20	R	LC

MOTOR CABLES

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	B.H.P.	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING		
			No. in Parallel per Pole	In the Circuit	Rule				
Sanitary & Em'y Fire Pump	2	20	1	6	26	31	30	V	LC
Lub. Oil Pump	2	21	1	6	27	31	30	V	LC
Fuel Oil Service Pump	2	8.8	1	2.5	11	17	20	R	LC
Main Condensate Pump	2	30	1	10	38	44	40	V	LC
Aux. Condensate Pump	1	30	1	10	38	44	20	V	LC
Boiler Blower	2	20/73	1	50	89.5/29	115	40	V	LC
Turning Gear	1	10	1	2.5	15.5	17	30	V	LC
Boiler Blower	1	0.8	1	2.5	1.3	17	50	R	LC
Aux. Circulating Pump	1	90	1	50	114	115	10	V	LC
Condensate Heater Drain P.	2	18	1	6	23	31	50	V	LC
Sea Water Circ. Pump for Evap.	1	9.5	1	2.5	13	17	40	R	LC
Fire Pump	1	55	1	25	66	77	30	V	LC
Eng. Room Bilge Pump	1	10	1	4	13	24	40	V	LC
Steering Gear	2	16	1	6	20	31	50	V	LC
Main Circulating Pump	1	110	1	70	138	145	30	V	LC
Compressor	2	45	1	25	58	77	50	V	LC
Distillate Pump	2	3	1	2.5	4	17	20	V	LC
Lye Pump	2	3	1	2.5	4	17	20	V	LC
Exhaust Fan for Pump Room	1	2	1	2.5	2.5	17	120	R	LC
- Do -	1	4	1	2.5	7	17	30	R	LC
Flue Gas Exhaust Fan	1	22	1	6	28	31	30	V	LC
Lub. Oil Separator	1	3	1	2.5	4	17	20	R	LC
Eng. Room Vent. Fan	4	6	1	2.5	8	17	30	R	LC
Boiler Room Vent. Fan	4	6	1	2.5	8	17	30	R	LC
Compressor for Refrig.	2	6	1	2.5	8	17	20	R	LC
Cooling Water Pump for Refr.	1	2	1	2.5	3	17	20	R	LC
Compressor for Air Con.	2	30	1	10	38	44	20	V	LC

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.

Electrical Contractors. Date.....

COMPASSES

Have the compasses been adjusted under working conditions **YES**

Builder's Signature. Date **2/12/64**

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 **26-11-1964**

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith **No**

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) **The Electrical Installation of this ship was examined and tested by the requirements of Chapter C. Section 11, of the Regulations and in accordance with the Rules, Approved plans and the Secretary's Letter. All recommendations made were carried out and the installation is considered satisfactory.**

Total Capacity of Generators **950** Kilowatts.

The amount of Fee ... £ : : When applied for,

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Travelling Expenses (if any) £ **12 : 10s :** When received,

(SMK A/C) 19

K. Iwamoto W.A. Cook for self & Y. Kojima
 Surveyors to Lloyd's Register of Shipping
 K. Iwamoto, W.A. Cook & Y. Kojima

FRIDAY - 2 APR 1965

Committee's Minute.....

Assigned **See Rpt. 1**

3m.5.60—Transfer. (The Surveyors are requested not to write on or below the space for Committee Minute.)



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