16. JUL. 1962

Rpt. 13

No. 67905.

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office .....

Date of writing Report 2/5/62 19.... When handed in at Local Office 18 JUN 1962 19.... Port of H U L L.

No. in Reg. Book ..... Survey held at Hull. Date, First Survey 30. 3. 62 Last Survey 1. 6. 1962.

(No. of Visits 8 -)

on the "THEO H. SWANTON" Tons { Gross ..... Net .....

Built at Hessle. By whom built Richard Dunson (Hessle) Ltd. Yard No. S.781 When built 1962.

Owners Melbourne Harbor Trust Commissioners Port belonging to Melbourne.

Installation fitted by Richard Dunston (Hessle) Ltd. When fitted 1962.

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

Plans, have they been submitted and approved Yes System of Distribution Three wire; Two wire Voltage of Lighting 110

Heating 110 Power 400 ~~xxxxx~~ A.C. Lighting A.C. Power A.C. If A.C. state frequency 50 cycle.

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 ..... Alternators fitted with AVR Yes, ~~Generators~~, are they ~~xxxxxxxxxxx~~ voltage ~~xxxxxxx~~, and level c~~xxxxxxx~~ under working conditions Yes.

Are the Altrs. ~~xxxxxx~~ arranged to run in parallel No. 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 Yes. Position of Generators Two, Engine room aft, Port and Starboard each 75 K.W.

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 Two On athwartship platform aft. S.110 volt P. 400 volt.

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 Steel cubicle type, if of synthetic insulating material is it an Approved Type Yes, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule Yes. 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 Statter triple pole air break circuit breakers with overload releases.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Pressure contact switches. (Watt meters = 2).

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule ..... Instruments on main switchboard 2 ammeters 2 voltmeters 2 frequency meters ~~xxxxxxxx~~ 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 Lamps to earth via.fuses. Preference Tripping, state if provided No., and tested -

Switches, Circuit Breakers and Fuses, are they as per Rule Yes., are the fuses an Approved Type Yes. make of fuses G.E.C., are all fuses labelled Yes. If circuit breakers are provided for the generators, at what overload do they operate 25%, and at what current do the reverse current protective devices operate -. 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 6% 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 No., if so, are they adequately protected -. State type of cables (if in conduit this should also be stated) in machinery spaces BUTYL & PVC, galleys PVC and laundries -. State how the cables are supported or protected In Machinery spaces exposed positions, etc., clipped to steel tray plates or direct to steelwork, in accommodation clipped to wood battens or direct to wood battens or direct to woodwork.

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 -

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* -. *Is an alternative supply provided* Yes

Secondary Batteries, *are they constructed, fitted and adequately ventilated as per Rule* -, *state battery capacity in ampère 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, accommodation, fore hold.

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* None., *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* Yes. **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 Yes.

Lightning Conductors, *where required are they fitted as per Rule* Steel Mast.

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* -, *location of transmitter and receiver* -

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: Kw. per Generator	Volts	Ampères	Revs. per Min.	PRIME MOVER: TYPE	MAKER
MAIN PSA	1	Brush No.28/403172	75	400	123	1500	Diesel	National McLaren No.6LE0359/5
SSA	1	Brush No.28/403171	75	400	123	1500	-do-	-do- -do- -do- No.6LE0360/
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES

DESCRIPTION	No. of	Kw.	CONDUCTORS: No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES: In the Circuit	Rule	APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
MAIN GENERATOR ... PSA	1	75	1	19.083	123	202	36	BUTYL	SWALC & B.
" " SSA	1	75	1	19.083	123	202	33	-do-	-do- -do-
EMERGENCY GENERATOR ...									
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

DESCRIPTION								

DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.) 110 volt distribution.

DESCRIPTION	CONDUCTORS: No. in Parallel per Pole	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES: In the Circuit	Rule	APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
Accommodation circuit.	1 twin	7/036	21	21	87	PVC	SWAPVC
Deck lighting circuit.	1	7/052	29	37	105	-do-	PVC sheathed.
Engine room circuit.	1	7/052	18	37	30	-do-	-do-
Starboard heating circuit.	1	19/064	20	92	59	-do-	-do-
Port heating circuit.	1	19/064	21	92	86	-do-	-do-
Forward circuit.	1	7/052	13	37	195	-do-	-do-
Navigation & wheelhouse circuit.	1	7/036	6	25	105	-do-	-do-
Navigation indicator board.	1	7/036	3	25	6	-do-	-do-

MOTOR CABLES

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	B.H.P.								
									400 volt distribution.	
Ballast pump.	1	20	1x3core	7.064	28	35	83	PVC	SWAPVC
Steering gear.	1	4	-do-	3.029	4	5	36	BUTYL	SWALC & B
G.S.pump.	1	25	-do-	19.044	32	42	97	PVC	SWAPVC
O.F.transfer pump.	1	1.5	-do-	3.029	2	7	85	PVC	-do-
Windlass.	1	18	-do-	7.044	30	45	205	BUTYL	SWALC & B
Capstan.	1	14	-do-	7.036	23	30	47	BUTYL	-do-
Dewatering pump.	1	20	-do-	7.064	28	35	74	PVC	SWAPVC
Door ram pump.	1	12	-do-	7.044	18	22	63	PVC	-do-
Air compressor.	1	7	-do-	7.029	10	13	20	PVC	-do-
Turning gear.	1	5	-do-	3.036	8	9	58	PVC	-do-
Lub.oil purifier.	1	½	-do-	3.029	1	7	67	PVC	-do-
Lub.oil heater 8 K.W.	1	-	-do-	7.029	10	13	67	PVC	-do-
Calofifier 6 KW.	1	-	-do-	3.036	8	9	56	PVC	-do-
30 KVA pransformer.			-do-	19.052	40	50	22	PVC	-do-
									110 volt distribution.	
Shore supply.	2	-	1	7.052	30	37	55	PVC	PVC sheathed.
Radar.	1	-	1	7.052	12	37	28	-do-	-do- -do-
3 KW boiler.	1	-	1	7.044	28	31	90	-do-	-do- -do-
R/T battery charge.	1	-	1	7.036	12	25	105	-do-	-do- -do-
Domestic F.W.pump.	1	¾	1	7.036	8	25	78	-do-	-do- -do-
Auxiliary bilge pump.	1	1½	1	7.036	17	25	75	-do-	-do- -do-

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

1/8/62

0302 1/2

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.

per pro RICHARD DUNSTON (HESSLE) LTD.

W G Shaw ..... *Electrical Contractors.* *Date* 14-6-62

COMPASSES

Have the compasses been adjusted under working conditions YES

per pro RICHARD DUNSTON (HESSLE) LTD.

W G Shaw ..... *Builder's Signature.* *Date* 14-6-62

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* "CHARLES H. McKAY"

Plans. *Are approved plans forwarded herewith* Yes. *If not, state date of approval* -

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 Equipment of this vessel has been installed in accordance with the Rules, Approved plans and Secretary's letters.

The materials and workmanship are good.

On completion the equipment was operated under working conditions and the insulation resistance of all circuits and apparatus was measured all with satisfactory results.

Total Capacity of Generators 150 *Kilowatts.*

The amount of Fee ... ... £ 64 : 10s : | When applied for, 13 JUL 1962 19

Travelling Expenses (if any) £ 2 : 10s : | When received, 19

J. Vincent.

Surveyor to Lloyd's Register of Shipping

Committee's Minute MONDAY 13 AUG 1962

Assigned SuRpt-1

17.7.62.

5m,3.58—**Transfer.** (MADE AND PRINTED IN ENGLAND)

(*The Surveyors are requested not to write on or below the space for Committee Minute.*)