

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

27 APR 1955

Date of writing Report 23-3-1955 When handed in at Local Office 8.4.1955. Port of GLASGOW

No. in Survey held at GREENOCK Date, First Survey 13.12.54 Last Survey 16.3.1955  
 Reg. Book. (No. of Visits 8)

95744 on the M.V. "SCOTTISH HAWK" Tons { Gross 1147.61  
 Net 6185.24

Built at GREENOCK By whom built GREENOCK DOCKYARD CO LTD Yard No. 483 When built 1955

Owners SCOTTISH TANKER CO. LTD. Port belonging to GLASGOW

Installation fitted by ARCHD. WATSON & DUNDAS LTD. When fitted 1955

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 Two wire Voltage of Lighting 110

Heating — Power 110 D.C. or A.C., Lighting DC Power DC 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 Two 150 KW Diesel sets

at port side of engine room. One 75 KW steam set on flat port side forward end of engine room.

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 flat, port side, forward engine room bulkhead.

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 Sindanyo

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 —

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 breakers fitted with overcurrent and reverse current trips.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole circuit breakers fitted with overcurrent trips, or double pole knife switch and fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule YES Instruments on main switchboard 3

ammeters 3 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 Earth lamps 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 Siemens Zed, are all fuses labelled YES If circuit breakers are provided for the generators, at what overload do they operate 150% full load current

and at what current do the reverse current protective devices operate 10-15% full load current

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 less than 6 1/2 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 LCAB & LC, galleys LCB

and laundries LCB State how the cables are supported or protected Machinery spaces LCAB or LC

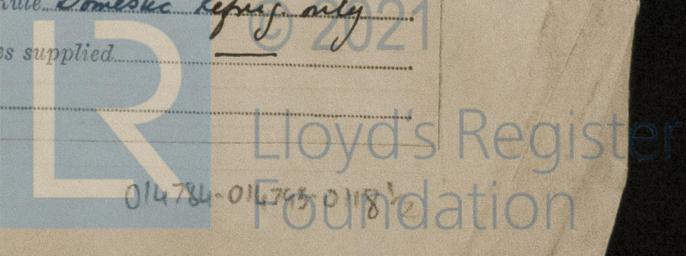
cables clipped to steel plate, perforated tray or steelwork. Main LCAB cables clipped to steel plate or perforated tray. Accommodation LCB cables clipped to woodwork or steelwork.

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 Domestic Repair only

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... and compartments where lamps are fitted

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 One 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... 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... 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... Yes

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... Siemens Zed 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... Frame space 50-51

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.		MAKER.	
MAIN	2	W.H. Allen Sons & Co. Ltd.	150	110	1365	550	Oil	W. H. Allen Sons & Co. Ltd.	
	1	W.H. Allen Sons & Co. Ltd.	75	110	680	500	Steam	Belliss & Morcom Ltd.	
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	2	150	2	91/103	1365	1564	246	VC	LCAB
" " EQUALISER	1	75	1	91/103	680	782	123	"	"
			1	91/103	680	782	70	"	"
			1	61/093	492	492	35	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR GENERATOR									

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.			
Engine Room Vent. Aft etc.	1		37/072	194	260	174	VC	LCAB
Shore Connection Box	1		37/083	300	314	204	"	"
Sub Switchboard Midships	1		61/103	484	572	540	"	"
Aft Recommendation Lighting	1		19/083	141	202	204	"	"

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. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATION.	PROTECTIVE COVERING.
			In the Circuit.	Rule.			
Engine Room Auxiliaries	1	7/044	26	45	162	VC	LCAB
" " "	1	7/064	71	80	354	"	"
" " "	1	19/052	90	110	96	"	"
Aft Recomm. Vent Fans	1	19/064	74	143	174	"	"
" " "	1	7/044	22	45	240	"	LCB
Boat Winches, aft.	1	7/064	40	80	240	"	LCAB
Domestic Refrig. Gear	1	19/052	85	110	300	"	"
Port Deck Lighting post	1	7/052	27	60	48	"	LCB
Upper Deck Lighting post aft	1	7/052	23	60	18	"	"
3 K.W. Water Boiler, port deck	1	7/044	27	45	240	"	"
Engine Room Lighting Section Panel	1	19/052	60	110	72	"	LCAB
Engine Room Lighting	1	7/044	15	45	96	"	"
Battery Charging Panels	1	7/044	16	45	72	"	"
Navigational Instruments etc	1	7/064	29	80	150	"	LCB
Deck & Forecastle Lighting	1	7/064	11	80	150	"	"
Forecastle Lighting	1	7/036	4	30	540	"	LCAB
Upper Bridge Deck Lighting post	1	7/052	24	60	120	"	LCB
Bridge Deck Lighting, 5th	1	7/052	35	60	90	"	"
'Tween Deck Storerooms & Stairway Ltg.	1	7/052	26	60	70	"	"
Boat Winches midships	1	7/052	40	60	54	"	"
Wireless	1	19/052	15	110	150	"	"
Radar	1	19/052	40	110	60	"	"
Suez Canal Searchlight	1	19/064	40	143	560	"	LCB & LCAB
Accommodation Vent. m. midships	1	7/052	57	60	90	"	LCB
Recomm. Fans & Panting Gear midships	1	19/052	49	110	90	"	"

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.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
D. F. Priming Pump	1	1.5	1	7/036	13	24	438	Rubber	LCAB
F.W. Circ. Pump	1	55	1	61/093	427	492	204	VC	"
S.W. Circ. Pump	1	47	1	37/103	364	408	96	"	"
Forced Lub Oil Pump	1	23	1	37/072	178	260	564	"	"
Therming Gear	1	18	1	19/083	149	202	252	"	"
Forced Draught Fan	1	8.5	1	19/052	70	110	318	"	"
H.O. Pumps	2	7.5	1	7/064	60	80	462	"	"
Gen. F.W. Circ. Pump	2	2.5	1	7/044	21.5	45	234	"	"
Gen. S.W. Circ. Pump	1	4.75	1	7/044	41	45	156	"	"
Engine & Boiler Room Vent Fans.	4	4	1	7/052	35	60	96	"	"
Domestic Refrig. Compressors	2	7	1	7/064	55	80	144	"	"

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.

*Arch. Watson & Dunlop Ltd*  
*Walsail (Winstor).* Electrical Contractors. Date *24-3-55*

COMPASSES.

Have the compasses been adjusted under working conditions... *Yes*

THE GREENOCK DOCKYARD CO. LTD.

*David Brown* Builder's Signature. Date *15<sup>th</sup> April 1955*  
 SECRETARY

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... *7-1-1955*

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 fitted on board under Special Survey, tested under working conditions and found satisfactory. The quality of materials and workmanship is good.*

*SMC 8/4/55*

The Surveyors are requested not to write on or below the space for Committee's Minute.

Total Capacity of Generators *375* Kilowatts.

The amount of Fee ... £ 98 : 5 : When applied for,

*1/5<sup>th</sup> to London* £ 19 : 13 : *as per 19*  
*4/5<sup>th</sup> to Glasgow* £ 78 : 12 :

When received,

Travelling Expenses (if any) £ — : 16 : 6 19

*London*  
*Glasgow* £ 1 : 12 : 6

*Fred B. Mont*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 26 APR 1955*

Assigned *See GRR FE. MCHY. R/pt. 25341*

*AGC 3.5.55*

