

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 11TH SEPT. 1950 When handed in at Local Office 12 SEP 1950 Port of NEWCASTLE-ON-TYNE 26 SEP 1950No. in Survey held at NEWCASTLE - ON - TYNE Date, First Survey 26TH APRIL 1950 Last Survey 29TH AUG 1950
Reg. Book. (No. of Visits 8)90237 on the M. V. "ATHEL BEACH" Tons { Gross 7533.23
Net 4155.83Built at NEWCASTLE - ON - TYNE By whom built HAWTHORN LESLIE & CO LTD Yard No. 700 When built 1950Owners ATHEL LINE LTD. Port belonging to LIVERPOOL BRITISH.Installation fitted by HAWTHORN LESLIE & CO LTD. When fitted 1950Is 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 DECCA TYPE 155APlans, have they been submitted and approved Yes System of Distribution two wire Voltage of Lighting 110Heating — Power 110 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 fittedwith a trip switch — Generators, are they compound wound Yes, and level compounded under working conditions Yes,if not compound wound state distance between generators — and from switchboard — Are the generators arranged to runin parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive polenegative Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing — Have certificates oftest for machines under 100 kw. been supplied Yes and the results found as per Rule YesPosition of Generators in engine roomis the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury anddamage from water, steam and oil Yes Switchboards, where are main switchboards placed near generators—

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 slate, if of synthetic insulatingmaterial is it an Approved Type —, if of semi-insulating material (slate or marble) are all conducting parts insulated therefrom asper Rule Yes Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgearfor each generator and arrangement of equaliser switches Triple pole circuit breaker fitted with R/C & O/Ltrips with time lags.and the switch and fuse gear (or circuit breakers) for each outgoing circuit Double pole circuit breaker or doublepole switch and fuses.Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 5ammeters 5 voltmeters — synchronising devices. For compound machines in parallel are the ammeters and reversed currentprotection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided earthlampsSwitches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes,make of fuses "Zed" type, are all fuses labelled Yes If circuit breakers are provided for the generators, at whatoverload do they operate F.L. final setting 50% O.L. and at what current do the reversed current protective devices operate 15% F.L.Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule YesCables, 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%, are the ends of all cables having a sectionalarea of 0.01 square inch and above provided with soldering sockets Yes Are all paper insulated and varnished cambric insulatedcables 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 theyadequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit —or of the "HR" type — State how the cables are supported or protected clipped to perforated traywoodwork or metalwork and protected by plating or pipe where necessary.——Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertightbulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holeseffectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule —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 and fitted as per Rule... Yes... are they adequately ventilated... Yes... state battery capacity in ampere hours... Yes

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... Yes... Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present... Yes... if so, how are they protected... Flameproof fittings installed in pump room in accordance with approved plans... and where are the controlling switches fitted... accomm. - centrecastle bridge deck... Are all fittings suitably ventilated... Yes... Searchlight Lamps, No. of only wiring... whether fixed or portable... Yes... are they of the carbon arc or of the filament type... Yes

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... 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... Control Gear and Resistances, are they constructed and fitted as per Rule... Yes... Lightning Conductors, where required are they fitted as per Rule... Yes... Ships carrying Oil having a Flash Point 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... "Zed" type... Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships... Yes... Are the cables lead covered as per Rule... Yes... E.S.D., if fitted state maker... Marconi... location of transmitter... Shell Fr. 44 Port... and receiver... Shell Fr. 44 starboard... 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.	
			Kilowatts per Generator.	Volts.	Ampères.	Revs. per Min.	TYPE.	MAKER.
MAIN ...	2	Sunderland Forge	50	110	454	500	steam engine	Peter Brooker Road.
	1	"	50	110	454	500	O.F. FLASH I.C. BELOW 150° F	National Gas & Oil Eng Co
EMERGENCY ...								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet 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 ...	50	1	61.093	454	492	50	V.C.	L.C.
" " EQUALISER ...	—	1	37.083	—	314	25	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR...								

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

DESCRIPTION.								
ENG R.M. SECTION	PANEL No 57 FROM MAIN S.B.	1	19.052	69	110	30	V.C.	L.C.A.B.
"	" No 56	1	19.052	93.5	110	30	"	"
"	" No 55	1	19.083	130.5	202	30	"	"
"	" No 54	1	19.064	77.5	143	30	"	"
STEERING GEAR CO. SWITCH	"	1	19.064	50	143	348	"	"
REFRIG CONTROL 'J'	"	1	19.064	46.7	143	375	"	"
VENT-ETC SECT. PANEL S.3	"	1	37.083	170.6	314	120	"	"
POWER & HEAT	" S.2.	1	19.064	70.4	143	120	"	"
BOAT WINCHES ETC	" S.8	1	37.083	168	314	141	"	"
MIDSHIP MASTERBOARD SI.	"	1	37.103	173	408	561	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet 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 SUPPLY FROM MAIN S.B.	1	19.064	15	143	561	V.C.	L.C.A.B.
SUEZ CANAL COMM BOX	1	19.064	28	143	1290	"	"
NAVIGATION	1	7.052	2	37	723	Rubber	"
GYRO COMPASS	1	19.052	10	110	561	V.C.	"
RADAR	1	19.064	15	143	522	"	"
ENG. ROOM LTR. ETC. D.B. No 14 FROM S.P. 57	1	7.052	18.7	37	210	Rubber	"
" " " 15 " " "	1	7.052	17.4	37	165	"	"
" " " 16 " " "	1	7.052	9.8	37	210	"	"
" " " 17 " " "	1	7.052	14.1	37	30	"	"
VENTILATION ETC. " 13 " S.P. 53	1	7.052	20.3	37	276	"	"
LIGHTING " " 10 " " "	1	7.052	19.3	37	198	"	"
" " " 18 " " "	1	7.052	18	37	198	"	"
" " " 8 " " "	1	7.052	24	37	162	"	L.C.
" " " 9 " " "	1	7.052	24	37	75	"	"
" " " 11 " " "	1	7.052	11	37	105	"	"
" " BRIDGE " 3 " S.P. 51.	1	7.052	16	37	123	"	"
" " " 1 " " " "	1	7.052	25	37	162	"	"
" " " 2 " " " "	1	7.044	17	31	162	"	"
" NAV. ALT. SUPPLY " " "	1	7.052	2	37	162	"	"
" ETC. D.B. No 4 " " "	1	7.052	25	37	96	"	"
" " " 6 " " " "	1	7.052	21	37	45	"	"
" & VENT-ETC. " 5 " " "	1	7.052	25	37	45	"	"
" FORECASTLE " 7 " " "	1	7.052	8	37	345	"	L.C.A.B.
AIR COND. UNIT " " "	1	7.044	14	31	132	"	L.C.

ALL IMPORTANT MOTORS TO BE ENUMERATED.

MOTOR CABLES.

DESCRIPTION.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet 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.			
CRANE MOTOR	1	3	1	7.064	26	80	150	V.C.	L.C.A.B.
FRESH WATER PUMP	1	8 1/2	1	19.052	70	110	210	"	"
BILGE & SANY	1	18	1	19.083	143	202	210	"	"
TURNING GEAR MOTOR	1	7.5	1	19.052	62	110	285	"	"
REFRIG PUMP MOTOR	1	1	1	7.044	10	31	210	Rubber	"
FUEL VALVE COOLING PUMPS	2	2	1	7.044	18	31	210	"	"
LUB. OIL PURIFIERS	2	2	1	7.044	18	31	210	"	"
FUEL PRIMING PUMP	1	1 1/2	1	7.044	13.5	31	240	"	"
FRESH WATER PUMP (STANDBY)	1	5	1	19.052	42.5	110	210	V.C.	"
WATER CIRC. PUMP (DIESEL GEN.)	1	4	1	7.064	34	80	135	"	"
FUEL OIL PURIFIER	1	2	1	7.044	18	31	210	Rubber	"
GRINDER MOTOR	1	3	1	7.052	26	37	150	"	"
DRILL MOTOR	1	2	1	7.044	18	31	150	"	"
SHAPING M/C MOTOR	1	2	1	7.044	18	31	150	"	"
LATHE MOTOR	1	2	1	7.044	18	31	150	"	"
STEERING MOTORS	2	15	1	19.064	117	143	50	V.C.	"
REFRIG COMPRESSOR	1	4	1	7.064	85	80	30	"	"
ENG. ROOM VENT FANS	2	1.6	1	7.052	13	37	309	Rubber	"
BOAT WINCHES	4	10	1	19.064	78	143	180	V.C.	L.C.
BOILER ROOM EXHAUST FAN	1	3 1/4	1	7.064	28	80	369	"	L.C.A.B.
THERMOTANK SUPPLY FANS	2	3 1/2	1	7.064	32	80	348	"	L.C.

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.

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

Chapman

Electrical Contractors.

Date *13/9/50*

COMPASSES.

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

FOR R. & W. HAWTHORN, LESLIE & CO. LIMITED.

Chapman

Builder's Signature.

Date *13/9/50*

Have the foregoing descriptions and schedules been verified and found correct..... *Yes*

Is this installation a duplicate of a previous case..... If so, state name of vessel.....

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, whether insulation tests, etc., have been made, opinions as to class, etc.).....

The electrical equipment of this vessel has been fitted on board under Special Survey seen under working conditions Generators Circuit Breakers and insulation test carried out and all found to be satisfactory.

The materials and workmanship are good.

The equipment as installed is suitable in my opinion for a class ship.

Noted SW 5/10/50.

Total Capacity of Generators..... *150* ✓ Kilowatts.

The amount of Fee ... £ *62* : *10* : When applied for, *25 SEP 19 1950*

Travelling Expenses (if any) £ : : When received, *19*

J. M. Wright

Surveyor to Lloyd's Register of Shipping.

FRI. 13 OCT 1950

Committee's Minute.....

Assigned *See minute on S.B. Rpt*