

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

2 DEC 1947  
Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office **28 NOV 1947** Port of **HULL.**

No. in Survey held at **HULL.** Date, First Survey **13.10.47** Last Survey **6.11.47**  
Reg. Book. (Number of Visits.....I.D.....)

**32573** on the **"SPRINGBANK" ex "SAMSPELGA".** Tons Gross **7248**  
Net **4398**

Built at **Baltimore** By whom built **Bethlehem Fairfield Shipyard, Inc.** Yard No. **-** When built **1944**

Owners **Bank Line Ltd. (Managers: A. Weir & Co.)** Port belonging to **London (now Glasgow).**

Electrical Installation fitted by **The Fairfield Shipyard Inc., Baltimore.** Contract No. **-** When fitted **1944**

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

Have plans been submitted and approved **Yes** System of Distribution **two wire insulated** Voltage of supply for Lighting **120**

Heating **120** Power **120** Direct or Alternating Current, Lighting **D.C.** Power **D.C.** If Alternating Current state periodicity **-** Prime Movers, **-**

has the governing been tested and found as per Rule when full load is suddenly thrown on and off **Yes** Are turbine emergency governors fitted with a trip switch as per Rule **-** Generators, are they compound wound **Yes**, are they level compounded under working conditions **Yes**

if not compound wound state distance between generators **-** and from switchboard **-** Where more than one generator is fitted are they arranged to run in parallel **Yes**, are shunt field regulators provided **Yes** Is the compound winding connected to the negative or positive pole **negative**

Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing **No** Have certificates of test for machines under 100 kw. been supplied **No** and the results found as per rule **-** Are the lubricating arrangements and the construction of the generators as per rule **No** Position of Generators **Generator flat, engine room starboard side.**

is the ventilation in way of generators satisfactory **Yes**, are they clear of inflammable material **Yes**, if situated near unprotected combustible material state distance from same horizontally **-** and vertically **-**, are the generators protected from mechanical injury and damage from water, steam and oil **Yes**, are the bedplates and frames earthed **Yes** and the prime movers and generators in metallic contact **Yes** Switchboards, where are main switchboards placed **Adjacent to generators.**

are they in accessible positions, free from inflammable gases and acid fumes **Yes**, are they protected from mechanical injury and damage from water, steam and oil **Yes**, if situated near unprotected combustible material state distance from same horizontally **-** and vertically **-**, what insulation material is used for the panels **Ebony Asbestos**, 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 frame effectually earthed **Yes**

Is the construction as per Rule **Yes**, including-accessibility of parts **Yes**, absence of fuses on the back of the board **Instrument fuses only at back of board.** individual fuses to pilot and earth lamps, voltmeters, etc. **Yes** locking of screws and nuts **Yes**, labelling of apparatus and fuses **Yes**, fuses on the "dead" side of switches **Yes** Description of Main Switchgear for each generator and arrangement of equaliser switches **D.P. circuit breakers with overload and reverse current trips; T.P. isolating switch (including equaliser).**

and for each outgoing circuit **D.P. switch and D.P. cartridge fuses.**

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule **Yes** Instruments on main switchboard **three** ammeters **three** voltmeters **-** synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the equaliser connection **Yes** Earth Testing, state means provided **Earth lamps**

Switches, Circuit Breakers and Fuses, are they as per Rule **standard** are the fuses an approved type **A.I.E.E. standard**, are all fuses labelled as per Rule **Yes** If circuit breakers are provided for the generators, at what overload current did they open when tested **-**, are the reversed current protection devices connected on the pole opposite to the equaliser connection **-**, have they been tested under working conditions, and at what current did they operate **Yes** Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule **Yes**

Cables, are they insulated and protected as per the appropriate Tables of the Rules **standard** 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 **less than 6%**, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets **No, but adequate mechanical clamps are provided.** Are paper insulated and varnished cambric insulated cables settled at the ends **-**

with insulating compound - or waterproof insulating tape - 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 cables laid under machines or floorplates **Yes**, if so, are they adequately protected **Yes**. Are cables in machinery spaces, galleys, laundries, etc., lead covered **Yes** or run in conduit - State how the cables are supported and protected **Supported clear of bulkheads in steel clips.**

Are all lead sheaths, armouring and conduits effectually bonded and earthed **Yes**. Refrigerated chambers, are the cables and fittings as per Rule - 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** and with what material **Lead or plastic compound.** Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule **Yes**. Emergency Supply, state position **none** and method of control - Navigation Lamps, are they separately wired **Yes** controlled by separate double pole switches **Yes** 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**. Secondary Batteries, are they constructed and fitted as per Rule - , are they adequately ventilated - what is the battery capacity in ampere hours. - **Yes** Are fittings Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weather proof **Yes** installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present. **No**, if so, how are they protected. - , are all fittings suitably ventilated **Yes** and where are the controlling switches fitted. - , are all fittings and accessories constructed and installed as per Rule **Yes** Searchlight Lamps, No. of - , whether fixed or portable. - , are their fittings as per Rule. - Heating and Cooking, is the general construction as per Rule. - are the frames effectually earthed. - , are heaters in the accommodation of the convection type. - Motors, are all motors constructed and installed as per **AIES** **standard** and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil **Yes**, if situated near unprotected combustible material state minimum distance from same horizontally. - and vertically. - Are motors coupled to oil fuel transfer and unit **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 **none**. Have certificates of test for motors under 100 BHP intended for essential services been supplied and the results found as per Rule **No**. Control Gear and Resistances, are they constructed and fitted as per Rule **Yes**. Lightning Conductors, where required are they fitted as per Rule. - 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. - , are all fuses of the cartridge type. - are they of an approved type. - Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships. - Are the cables lead covered as per Rule. - Spare Gear, if the vessel is for open sea service have spares been provided as per Rule **Yes**, are they 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	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	3	20	120	167	400	Single cyl. steam engine.		
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	20	1	0.1969	167	182	40	rubber Lead covered & armoured.	
" " EQUALISER		1	0.0329		56	20	" " "	
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOE								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS							
Engine room	"L.1"	1	0.0521	60	75	20	Rubber Lead covered & armoured.
Cargo floodlights & stores Fwd.	"L.2"	1	0.0521	30	75	700	" " "
Midship accom & refrig stores	"L.3"	1	0.0829	60	103	500	" " "
Midship accom lighting	"L.4"	1	0.0829	60	103	540	" " "
Cargo floodlights aft	"L.5"	1	0.0521	30	75	320	" " "
Aft deckhouse, steering flat & stores.	"L.6"	1	0.0521	35	75	480	" " "
Boat deck accom & fathometer	"L.7"	1	0.0829	60	103	600	" " "
Wheelhouse	"L.8"	1	0.0206	30	44	590	" " "
Bridge deck accom & boat floods.	"L.9"	1	0.0829	60	103	200	" " "
Searchlight feeder.	"L.10"	1	0.0829	10	103	650	" " "

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS	"P.7"	1	0.0206	35	44	600	" " "
NAVIGATION LIGHTS	from "L.8"	1	0.0206	10	44	590	" " "
LIGHTING AND HEATING		1	0.0206	30	44	4	" " "
Battery charging	"S.B"	1	0.0020	1	5	40	" " "
Salinity indicator.							

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
			No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Refrig. compressor	"P.8"	1	7	1	0.0658	59	88	600	Rubber Lead covered & armoured.
Fresh water pump	"L.1"	1	3/4	1	0.0206	9	44	48	" " "
Aft vent fan	"L.6"	1	1 1/2	1	0.0206	15	44	400	" " "
Forward " "	"L.4"	1	1/2	1	0.0206	5.5	44	168	" " "
Mixer (galley)	"	1	1/3	1	0.0206	4	44	84	" " "
Blower (galley)	"	1	1 1/2	1	0.0206	15	44	48	" " "
Forward draught fan	"	1	8 1/2	1	0.0521	70	75	128	" " "
Port thermotank	"	1	3	1	0.0206	26	44	188	" " "
Stbd. "	"	1	3	1	0.0206	26	44	188	" " "
Galley fan	"	1	5/8	1	0.0206	7	44	94	" " "

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 Engineers. Date

COMPASSES.

Minimum distance between electric generators or motors and standard compass 53'0"  
 Minimum distance between electric generators or motors and steering compass 45'0"

The nearest cables to the compasses are as follows:—

A cable carrying .2 Ampères inside ~~feet from~~ standard compass 8' feet from steering compass.  
 A cable carrying .2 Ampères 8' feet from standard compass inside ~~feet from~~ steering compass.  
 A cable carrying - Ampères - feet from standard compass - feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted Yes

The maximum deviation due to electric currents was found to be Nil degrees on every course in the case of the standard compass, and Nil degrees on every course in the case of the steering compass.

Builder's Signature. Date

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

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

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith -

General Remarks (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electrical installation of this vessel as now seen appears to have been fitted in accordance with the standards of the American I.E.E. and minor repairs carried out at this port to bring the insulation tests up to Rule requirements.

The generators and circuit breakers and installation generally have been examined, tested under working conditions and found satisfactory.

It was noted that the generators are constructed in line with American practice for a standard temperature rise of 40°C.

The installation, as now seen, is in my opinion, such as could be accepted for classification with this Society.

*Notes. SW. + 1/24/47.*

Total Capacity of Generators 60 Kilowatts.

The amount of Fee ... £ 16: - 28 NOV 1947  
 Travelling Expenses (if any) £ : : When received. ....19.....

*W. H. Council*  
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 5 DEC 1947

*see minute on Rpt 9*

501,438.—Transfer. (MADE AND PRINTED IN ENGLAND.)  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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