

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

6 JAN 1948

Date of writing Report. 22-12-1947 When handed in at Local Office. 27th December 1947. Port of Sunderland. Received at London Office.

No. in Survey held at Sunderland. Date, First Survey 12-6-47 Last Survey 22-12-1947
Reg. Book. S.S. "ARABIA" (Number of Visits 30)

on the S.S. "ARABIA" Tons { Gross 8119.74 Net 5073.31

Built at Sunderland. By whom built Sir James Laing & Sons Ltd. Yard No. 774 When built 1947.

Owners Leonard Line Ltd. Port belonging to Liverpool

Electrical Installation fitted by Sunderland Forge & Engineering Co. Ltd. Contract No. 774 When fitted 1947.

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

Have plans been submitted and approved. Yes System of Distribution Two-Wire insulated Voltage of supply for Lighting 220

Heating 220 Power 220 Direct or Alternating Current, Lighting Yes Power Yes 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. Yes Have certificates of

test for machines under 100 kw. been supplied. Yes and the results found as per rule. Yes Are the lubricating arrangements and the construction

of the generators as per rule. Yes Position of Generators Engine Room, P. & S. Sides of Main Turbine.

, 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 on raised platform at aft engine room

bulkhead

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. Heavy "Birdcage" 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. Yes, 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 a triple pole (one pole

for equaliser) air break circuit breaker fitted with oil & time lag & R/V. for current tripping

device

and for each outgoing circuit for deck power, a DP. Circuit Breaker fitted with oil & time lag: other circuits, a double

pole, quick break Knife switch and double pole fuse.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes Instruments on main switchboard 6

ammeters 4 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 E lamps coupled to E through fuses & fuses

Switches, Circuit Breakers and Fuses, are they as per Rule. Yes, are the fuses an approved type. Yes, 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. 10%, are the reversed current

protection devices connected on the pole opposite to the equaliser connection. Yes, have they been tested under working conditions, and at what current

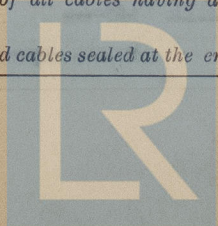
did they operate. 150 A Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule. Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules. Yes, 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. > 13. V. are the ends of all cables having a sectional area of 0.0

square inch and above provided with soldering sockets. Yes Are paper insulated and varnished cambric insulated cables sealed at the ends. Yes

J.P.
19.1.47



MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULA- TED WITH.	HOW PROTECTED.
	No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
Saloon Power & Ltg 'SB.B' - off 'SB.C'	1	19/064	105	135	347	V.C.	L.C.
Bridge Heating SB.'B.1' " 'B'	1	7/044	22.7	31	86	V.I.R.	L.C.
Forward Hold Vent Fans SB.'C'	1	7/044	24	31	24	"	"
Booster Fans SB - SK'E'	1	19/064	48	135	604	V.C.	"
Forward Section Panel 'F'	1	37/083	280	296	204	"	"
Midship Cooler Fans SB - SK.3	1	19/064	72	135	404	"	"
Aft Hold Vent Fans SB. SK.1.	1	7/064	36	75	193	"	"
Isolating Tank SB. Midships - off 'K'	1	7/064	36	75	48	"	"
Aft Cooler Fans S.B. - SK.4	1	19/064	52	135	270	"	"
Boiler Run Motors - SB.2.	1	7/064	36	75	180	"	"

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS ...							
NAVIGATION LIGHTS ...							
LIGHTING AND HEATING ...							
Cargo Lighting D.B. 7 - off SB. B	1	7/029	9	15	9	V.I.R.	L.C.
Capt. & Officers Ltg B. 2	1	7/036	19	24	86	"	"
No. 3 Stbl. - lower Ltg SK. 2 - off SK. 1.	1	7/044	20	31	54	"	"
Forward Cooler Ltg - SK. 1. D. 1	1	7/044	10	31	604	"	"
Cargo & 76 Ltg D.F. 1 - off SB. F	1	7/029	8.5	15	42	"	"
Cargo Ltg - D. 4. 1. off SB. G	1	7/029	1.5	15	40	"	"
Acetylene Connection	1	7/064	60	75	114	V.C.	"
3-hp Ltg D.B. lost - off Main Board	1	7/044	25	31	108	V.I.R.	"
" " " " " "	1	7/044	25	31	42	"	"
Auxiliary Boiler Heater	1	7/029	9	15	8	"	"

E.R. MOTORS

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Refrigerating Compressors.	2	7	1	7/044	28	31	40	V.I.R. L.C.
Boiler Feed Pump	1	100	1	37/103	370	385	220	V.C. "
Main Circulating Pump	1	100	1	37/103	370	385	182	" "
Induced Draft Fans	2	40	1	19/083	150	191	300/220	" "
Forward " "	2	22	1	19/052	85	104	200/180	" "
Tub. oil Pumps.	2	14	1	7/064	55	75	2/140	" "
Extraction " "	2	13.5	1	7/064	54	75	2/256	" "
Generator Cooling Pump	1	8	1	7/052	32	57	148	" "
Oil Fuel Pressure Pumps	2	4.75	1	7/044	20	31	60/120	V.I.R. "
Fresh Water Pump.	1	5.5	1	7/044	23	31	268	" "
Diesel Oil Transfer Pump	1	4	1	7/036	17	24	96	" "
Oil Purifiers	2	.5	1	3/029	3	5	162/158	" "
Oil Transfer Pump	1	24	1	19/052	90	104	160	V.C. "
Ballast Pumps.	1	33	1	19/064	124	135	212	" "
Gen. Service Pump	1	27	1	19/064	102	135	102	" "
Auxiliary Fire Pumps	1	27	1	19/064	102	135	206	" "
Exc. & Bridge " "	1	27	1	19/064	102	135	180	" "
Turning Motor	1	16	1	7/064	60	75	96	" "
Air Compressor	1	12.5	1	7/064	50	75	238	" "
Tub. oil Transfer Pumps	1	5	1	3/029	3	10	40	V.I.R. "
Waste Heat Boiler Feed Pumps	1	1.25	1	7/029	7	15	20	" "
Auxiliary Blower	1	3	1	7/036	17	24	34	" "
E. Air Vent Fans	4	4.75	1	7/044	21	31	2/120	" "
Boiler Motor	1	2	1	7/029	9	15	40	" "
Grinder " "	1	2	1	7/029	9	15	64	" "
Driller " "	1	1.5	1	7/029	7.5	15	36	" "
Oil Purifier Motor	1	.5	1	3/029	3	10	94	" "



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Lloyd's Register
Foundation

011 3/3

The foregoing is a correct description.

Sunderland Forge & Eng Co Ltd. Electrical Engineers. Date 23-12-1914.
W. J. Surney

COMPASSES.

The nearest cables to the compasses are as follows:—

A cable carrying Ampères feet from standard compass feet from steering compass.

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

..... *Alan Mason* Builder's Signature. Date *29.12.47*

Certificates. Are certificates of test for motors engaged on essential 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 installed under special survey in accordance with the approved plans and the "Rules for Electrical Equipment". The materials used are of good quality and design and the workmanship is good. On completion trials of the equipment were carried out with satisfactory results and the insulation resistance of each circuit was measured and found good. This equipment is in my opinion suitable for a classed vessel.

-noted

19.1.49

Total Capacity of Generators. (4×205) 820 Kilowatts.

The amount of Fee £110. 10. 6.

Expenses ~~Lease~~. 7. 8. 11
LON

Travelling Expenses (if any) £ : :

When applied for,

JAN - 5 1948

When received.

.....19.....

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned *See E. E. Mch. rpt.*