

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

11 JUN 1946

Received at London Office.....

Date of writing Report. 28-5-1946 When handed in at Local Office. 5 JUN 1946 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 27-11-45 Last Survey 28-5-1946
Reg. Book. (Number of Visits.....)

on the S.S. "WAVE KNIGHT"

Tons { Gross 8187
Net 4562

Built at Sunderland By whom built Sir James Loring & Sons Ltd Yard No. 764 When built 1946

Owners Admiralty Port belonging to London.

Electrical Installation fitted by Sunderland Forge & Engineering Co. Ltd. Contract No. 764 When fitted 1946

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

Have plans been submitted and approved yes System of Distribution Two-Wire insulated Voltage of supply for Lighting 110

Heating — Power 110 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 No, 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 — 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 in generator flat at aft L.P. Boilers

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 angle-iron framework near 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 Heavy "Sindurapo" 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 double-pole, single-

throw, quick-break knife switch and double-pole fuse.

and for each outgoing circuit a double-pole, double-throw 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 Two

ammeters Two voltmeters — synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

equaliser connection — Earth Testing, state means provided E. lamps coupled G.E. through 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 — are the reversed current

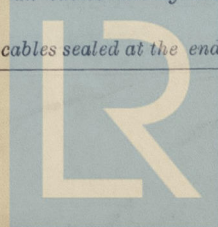
protection devices connected on the pole opposite to the equaliser connection — have they been tested under working conditions, and at what current

did they operate — 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 —

state maximum fall of pressure between bus bars and any point under maximum load > 6.0, are the ends of all cables having a sectional area of 0.01

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



Rule.....yes....., are they suitably stored in dry situations.....yes.....
and found satisfactory.....yes.....

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 ...	2 ✓	30 ✓	110 ✓	27.5 ✓	685 ✓	Single Cylinder Vertical Steam Engines		
EMERGENCY ...								
ROTARY TRANSFORMER								

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT		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.			
MAIN GENERATOR No. 1.	30	1	37/083	273	296	84	V.C.	L.C. on Steel Plate
" " EQUATIONS								
" " No. 2.	30	1	37/083	273	296	102	V.C.	L.C. " "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

[illegible]

WIRELESS	off. 3d.	...	1	7/064	20	75	✓ 117	V.C.	L.C.
NAVIGATION LIGHTS	off. 5d.	...	1	7/036	10	24	✓ 30	V.I.R	L.C.
LIGHTING AND HEATING	5.2.	...	Alternative supply through C.D.S. in Warehouse.						
Bridge Lighting DB. D-2	off	S-1			1	7/036	8	24	✓ 126	V.I.R	L.C.
Officers	"	" D-3	5.2.		1	7/064	12	75	✓ 114	V.C.	"
Stateroom	"	Port D-4	"	"	1	7/044	11.5	31	✓ 120	V.I.R	"
"	"	Starb. D-5	"	"	1	7/044	8	31	✓ 111	"	"
Bay to Compass Supply	"	"	"	"	1	7/036	14	24	✓ 21	"	"
Emergency W/T.	"	"	"	"	1	7/064	-	75	✓ 33	V.C.	"
Large Lg DB. D-6.	"	"	"	"	1	7/036	16	24	✓ 71	V.I.R	"
Forward Lg DB. Port D-7	"	"	"	"	1	7/052	7.5	37	✓ 84	"	"
"	"	Starb. D-8	D-16.		1	7/052	9	37	✓ 84	"	"
At Large DB. D-12	"	"	"	"	1	7/036	10	24	✓ 168	"	"
Upper BR DB Port. D-9.	"	"	"	"	1	7/052	6	37	✓ 60	"	"
"	"	Starb. D-10	"	"	1	7/052	7	37	✓ 102	"	"
"	"	off. D-11.	"	"	1	7/044	5	31	✓ 198	V.I.R.	"
Engine & Bls. Room Lg	D-13	"	"	"	1	7/044	18	42	✓ 24	V.C.	"
"	"	D-14	"	"	1	7/044	20	42	✓ 27	"	"
Deck Lighting	D-15	"	"	"	1	7/036	10	24	✓ 111	V.I.R	"

MOTOR CABLES.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.							
Turning Motor	1	16	1	19/064	124	135	258	V.C.	L.C.
Engine Room Vent Fan-Port	1	3	1	7/044	26	42	312	"	"
" " " -Starb.	1	3	1	7/044	26	42	234	"	"
oil pumpfit No.1.	1	.5	1	1/064	5.6	10	96	"	"
" " " 2.	1	.5	1	1/064	5.6	10	114	"	"
Workshop Motor	1	3	1	7/044	26	42	72	"	"
Boat Winch- Port aft.	1	2	1	7/036	18	28	90	"	"
" " Starb. "	1	2	1	7/036	18	28	207	"	"
" " Mid. Port	1	2	1	7/036	18	28	84	"	"
" " " Starb.	1	2	1	7/036	18	28	84	"	"
Harmotanks Frd.	1	3	1	7/044	26	42	132	"	"
" Aft.	1	3	1	7/044	26	42	132	"	"
" Midship	1	3	1	7/044	26	42	66	"	"
Penthy Exhaust Fan.	1	.5	1	3/036	5.6	10	120	"	"

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.

P. PRO THE SUNDERLAND FORGE & ENGINEERING CO., LTD.

H. Wilson

Electrical Engineers.

Date 29/5/46

COMPASSES.

Minimum distance between electric generators or motors and standard compass 18'

Minimum distance between electric generators or motors and steering compass 11'

The nearest cables to the compasses are as follows:—

A cable carrying 15 Ampères 7 feet from standard compass on the feet from steering compass.

A cable carrying 15 Ampères 7 feet from standard compass 7 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 West course in the case of the standard compass, and Nil degrees on West course in the case of the steering compass.

SIR JAMES LAING & SONS, LIMITED

Builder's Signature.

Date 31 May 1946

Is this installation a duplicate of a previous case Yes

If so, state name of vessel

S.S. "EMPIRE HERALD"

Plans. Are approved plans forwarded herewith No

If not, state date of approval

15.2.46 - Revised Plans

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 amendments thereto. The materials used are of good quality and design and the workmanship is good. On completion the equipment was operated on board with satisfactory results and the insulation resistance of all circuits was measured and found good. This equipment is in my opinion suitable for a classed vessel.

Noted

Flm 26.6.46

Total Capacity of Generators (2x30) 60 Kilowatts.

The amount of Fee ...

£28.10.0

When applied for

6 JUN 1946

Travelling Expenses (if any) £

When received

19

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI, 28 JUN 1946

Assigned

See F.E. machy.spt.



© 2020

Lloyd's Register
Foundation