

## REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

Date of writing Report... 23<sup>rd</sup> Dec 48... When handed in at Local Office... 10-1-1949... Port of... GlasgowNo. in Survey held at... Glasgow... Date, First Survey... 11-10-48... Last Survey... 27 Dec 48  
Reg. Book. (Number of Visits... 8)90880 on the M. V. "BRITISH MARINER" Tons { Gross... 8576  
Net... 4949

Built at... Glasgow... By whom built... Harland &amp; Wolff Ltd... Yard No... 1378G... When built... 1948

Owners... British Tanker Co. Ltd... Port belonging to... London... British

Electrical Installation fitted by... Harland &amp; Wolff Ltd... Contract No... 1378G... When fitted... 1948

Is vessel fitted for carrying Petroleum in bulk... Yes... Is vessel equipped with D.F... Yes... E.S.D... Yes... Gy.C... Yes... RADAR CROSSER  
Sub-Sig. MARK I.

Have plans been submitted and approved... Yes... System of Distribution... two wire... Voltage of supply for Lighting... 110

Heating... Power... 110... 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... 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 engine room

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... 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... 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 frame effectually earthed... Yes

the construction as per Rule... Yes... including accessibility of parts... Yes... absence of fuses on the back of the board... Yes... individual fuses

pilot and earth lamps, voltmeters, etc... Yes... locking of screws and nuts... Yes... labelling of apparatus and fuses... Yes... fuses on the "dead"

ends of switches... Yes... Description of Main Switchgear for each generator and arrangement of equaliser switches... Double pole circuit

breaker, with interlocked equaliser switch, fitted with O/L and R/C trips

for each outgoing circuit... Double pole switch and fuses

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

meters... 2... 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... Yes... are the fuses an approved type... Yes... are all fuses labelled as

Rule... Yes... If circuit breakers are provided for the generators, at what overload current did they open when tested... Full load, 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

they operate... 15% full load Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule... Yes

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...

maximum fall of pressure between bus bars and any point under maximum load... 5.1 volts... are the ends of all cables having a sectional area of 0.04

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



DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Poles.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	75	1	91/103	682	738	120	V.C.	L.C.A.B
EQUALISER	-	1	61/093	-	464	60	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (load plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. In Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	IN AMPERES.				
			In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS ...							
MIDSHIP MASTER BOARD (POWER LIGHTING)	1	37.003	155	343	520	V.C.	LCAB
" " " (RADAR & WIRELESS)	1	37.003	90	343	520	"	"
TURNING GEAR	1	19.052	80	104	60	"	"
SECT. BOX NO. 1 AFT ACCOM LTS & SMALL POWER	1	19.052	80	104	140	"	"
SECT. BOX NO. 2 ENG ROOM LIGHTING	1	7.064	44	75	40	"	"
OIL PURIFIERS S & F BOX M. 2	1	7.064	58	75	40	"	"
AFT ACCOM & ENG ROOM VENT S & F BOX FI	1	7.064	60	75	120	"	"
WORKSHOP MOTORS S & F BOX M. 1	1	7.064	70	75	120	"	"
AFT. BOAT WINCHES S & F PANEL	1	19.052	90	104	140	"	"
REFRIG PLANT	1	7.064	46	75	320	"	"
SHORE SUPPLY	1	37.072	-	246	120	"	"

	1	7/064	30	75	210	V.C.	L.C.B.
WIRELESS	1	7/044	27	31	170	Rubber	"
NAVIGATION LIGHTS & S & F BOX No 1	1	7/064	65	75	116	V.C.	L.C.B.
BOAT WINCH PORT MID	1	7/064	65	75	160	"	"
" " STARS? MID	1	7/036	17	24	90	Rubber	"
ACCOM VENT FANS No 1	1	7/036	17	24	90	"	"
" " " No 2	1	7/036	5	24	140	"	"
ECHO SOUNDING	1	3/029	3	5	20	"	L.C.
GYRO COMPASS	1	7/036	14	24	60	"	L.C.B.
HOSPITAL AIR CONDITIONING PLANT	1	7/064	23	75	86	V.C.	L.C.B.
RADAR (COSSOR MARK I.)	1	7/064	23	75	86	V.C.	L.C.B.
		MASTER BOARD		LIGHTING		CIRCUITS	
SUEZ CANAL PROJECTOR	1	19/052	30	104	620	V.C.	L.C.A.B.
S & F BOX No 2 & NAV. (ALT. SUPPLY)	1	7/044	15	31	202	Rubber	L.C.B.
S & F BOX No 3	1	7/044	18	31	112	"	"
S & F BOX No 4	1	BHS BARS	39	60	-	-	-
S & F BOX No 5	1	7/044	29	31	20	Rubber	L.C.B.
MAST FLOODLIGHTS	1	7/036	7	24	170	"	"

[illegible]



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 HARLAND AND WOLFF, LIMITED,

Govan Secretary.

Electrical Engineers:

Date

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass

13 feet Gyro motor generator

Minimum distance between electric generators or motors and steering compass

8

The nearest cables to the compasses are as follows:—

A cable carrying .2 Ampères led into feet from standard compass led into feet from steering compass.

A cable carrying 12 Ampères 6 feet from standard compass 6 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 any course in the case of the

standard compass, and nil degrees on any course in the case of the steering compass.

For HARLAND AND WOLFF, LIMITED,

Govan Secretary.

Builder's Signature.

Date

Is this installation a duplicate of a previous case Yes

If so, state name of vessel M.V. "BRITISH RANGER"

Plans. Are approved plans forwarded herewith

If not, state date of approval

27. 5. 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 fitted on board under Special Survey tested under working conditions and found satisfactory.

The materials and workmanship are good.

Noted sub 20/1/49

Total Capacity of Generators 150 Kilowatts.

The amount of Fee ... £ 62 : 10 :

When applied for, 4 JAN 1949

Travelling Expenses (if any) £ : :

When received, 19

J. A. Wright

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

18 JAN 1949

Assigned

SEE ACCOMPANYING MACHINERY REPORT



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