

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL) 20 APR 1942

Received at London Office.....

Date of writing Report. 27th March 1942 When handed in at Local Office. 17th April 1942 Port of Belfast

No. in Survey held at Belfast Date, First Survey 11th Oct. 1941 Last Survey 11th April 1942
Reg. Book. (Number of Visits..... 17.....)

on the M.V. "Dinsdale" Tons { Gross 8213.9
Net 4780.89

Built at Belfast By whom built Messrs Harland + Wolff Ltd Yard No. 1078 When built 1942-4

Owners Admiralty Port belonging to London

Electrical Installation fitted by Messrs Harland + Wolff Ltd Contract No. 1078 When fitted 1942-4

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 System Voltage of supply for Lighting 110

Heating - Power 110 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state frequency - Prime Movers,

has the governing been tested and found efficient when the whole 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. None 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 Starboard Side of Motor 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. On Platform, Starboard Side of

Motor Room.

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. Interolam, 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 ~~various types of switches~~

One 300 amp. Double pole change over knife switch, slow break, with

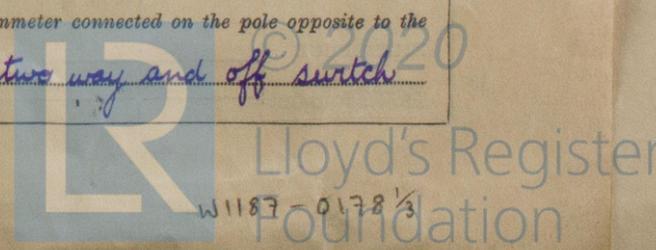
250 amp. fuse on each pole.

and for each outgoing circuit. Double pole changes over switches with fuses on each pole.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule. Yes Instruments on main switchboard. 2

ammeters. 2 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. Two earth lamps with two way and off switch



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... are the reversed current protection devices connected on the pole opposite to the equaliser connection... -... have they been tested under working conditions... -... 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... 4.5... 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 exposed ends... None...

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... No... if so, are they adequately protected... -... Are cables in machinery spaces, galleys, laundries, etc., lead covered... L.S.A.B. or run in conduit... -... State how the cables are supported and protected... L.S.A.B. Cables run in steel channel under fore & aft gangways; duplicate circuits L.S.A.B. cables run in plumbers piping along deck; Machinery spaces L.S.A.B. cable on plating; accommodation L.C. cable; tween deck spaces L.C. cable in conduit.

Are all lead sheaths, armouring and conduits effectually bonded and earthed... Yes... Refrigerated chambers, are the cables and fittings as per Rule... Yes... 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 effectually bushed... Yes... and with what material... Sheet Lead... Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... -... Emergency Supply, state position... -... 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... -... Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof... Yes... Are 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 Fitting (in Pump Rooms)

and where are the controlling switches fitted... Midships Accommodation... are all fittings suitably ventilated... Yes... are all fittings and accessories constructed and installed as per Rule... Yes... Searchlight Lamps, No. of... 1... whether fixed or portable... Portable... Army Pat. Signalling Projector... are their fittings as per Rule... Yes... 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 Rule... Yes... 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... -...

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... 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 the cartridge type... Yes... are they of an approved type... Yes... If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type... Yes... 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 megger tested and found satisfactory... Yes...

PARTICULARS OF GENERATING PLANT.

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amps, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amps, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amps, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amps, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amps, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

Table with columns: DESCRIPTION OF GENERATOR, No. of, RATED AT (Kilowatts, Volts, Amps, Revs. per Min.), DRIVEN BY, WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE (Fuel Used, Flash Point of Fuel).

LIGHTING & HEATING ETC. CABLES (CONTINUED)

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.

Table with columns: DESCRIPTION, CONDUCTORS (No. in Parallel per Pole, No. & Dia. of Strands), MAXIMUM CURRENT IN AMPS (In the Circuit, Rule), APPROX. LENGTH (Lead Plus Return Ft.), INSULATED WITH, How Protected.



GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead 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 the Circuit.	Rule.			
MAIN GENERATOR	25	1	37/103	227	240	45	Rubber	L.S.A.B.
" " EQUALISER								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								

MAIN DISTRIBUTION CABLES.

AUX. SWITCHBOARDS AND SECTION BOARDS								
Section Box No. 1. Ford & Midship Lighting	1	37/064	97.4	130	620	Rubber	L.S.A.B.	
No. 2. Portable Connections	1	19/052	18	64	180	"	"	
No. 3. Aft. Lighting	1	19/052	48	64	168	"	"	
No. 4 Motor Room Lighting	1	19/044	50.5	53	90	"	"	
No. 5 Vent Fans	1	19/064	52	83	150	"	"	
Dist. Box M.I. Motor Room Motors	1	19/064	42	83	250	"	"	
Signalling Projector	1	7/036	18.5	24	700	"	"	
D.C. Panel fitted to Bussbars on main board with double pole change over switch								

LIGHTING AND HEATING, ETC., CABLES.

WIRELESS (Duplicated)	1	19/064	23	83	675	Rubber	L.S.A.B.
NAVIGATION LIGHTS (Duplicated)	1	7/029	2	15	675	"	"
LIGHTING AND HEATING							
Dist. Box No. 1. Lighting & Navigating	1	7/052	32.5	37	90	Rubber	L.C.
" " No. 2. Lighting Accommodation	1	7/029	11.5	15	50	"	"
" " No. 3. " "	1	7/044	30	31	28	"	"
" " No. 4. " "	1	7/036	15	24	28	"	"
" " No. 5. Portable Connections	1	7/044	11.5	31	460	"	L.S.A.B.
" " No. 6. Lighting Focals	1	7/044	4.4	31	320	"	"
" " No. 7. Portable Connections	1	7/029	6.5	15	50	"	L.C.
" " No. 8. Lighting Accommodation	1	7/044	25.5	31	195	"	"
" " No. 9. " "	1	7/044	22.5	31	30	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.						
Turning Motor	1	10	1	19/064	80	83	120	Rubber L.S.A.B.
Workshop Motor	1	3	1	7/044	26	31	195	" "
F.O. Purifier	1	3	1	7/044	25.1	31	180	" "
Standby F.O. Pump	1	1.75	1	7/036	15.9	24	165	" "
L.O. Purifier	1	2.5	1	7/036	21.3	24	180	" "
Supply Fan No. 1. Ford.	1	3	1	7/064	26	46	480	" "
No. 2. Aft.	1	3	1	7/044	26	31	80	" "
Decontamination Fan	1	.125	1	3/036	2	10	75	" 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.



Electrical Engineers.

Date 13-4-42.

COMPASSES.

Minimum distance between electric generators or motors and standard compass Eighteen Feet

Minimum distance between electric generators or motors and steering compass Twenty Feet.

The nearest cables to the compasses are as follows:—

A cable carrying 0.13 Ampères on ~~from~~ standard compass 8 feet from steering compass.

A cable carrying 0.13 Ampères 8 feet from standard compass on ~~from~~ steering compass.

A cable carrying 18 Ampères 8 feet from standard compass 10 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power Yes, & calibrated with D.f. on and off.

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 no. degrees on any course in the case of the standard compass, and no. degrees on any course in the case of the steering compass.



Builder's Signature.

Date 13.4.42.

Is this installation a duplicate of a previous case Yes. If so, state name of vessel "EMPIRE DIAMOND"

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

The installation has been tested under full working conditions and found satisfactory. The materials and workmanship are good.
 The equipment has been fitted on board under special survey and in accordance with the approved plans.

Total Capacity of Generators 50 Kilowatts.

The amount of Fee ... £ 27 : 10 : 19.4.42
 To credit of pool £ 13-15-0
 Bel. £ 13-15-0
 Travelling Expenses (if any) £ : :
 When applied for, 19.4.42
 When received, 19.....

John Mizzell & for H. Haffner.
 Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 1 MAY 1942
 Assigned See Bel. 20 13221

2m.10.38.—Transfer. (MADE IN ENGLAND.) (The Surveyors are requested not to write on or below the space for Committee's Minute.)

