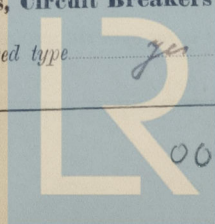


REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

5 AUG 1936

Date of writing Report 31st July 1936 When handed in at Local Office10 Port of BREMENNo. in Survey held at WESERMÜNDE
Reg. Book.Date, First Survey 26th June 36 Last Survey 23rd July 1936
(Number of Visits 7)68510 on the STEEL SC. TRAWLER NORTHERN DAWNTons { Gross 855
Net 643Built at WESERMÜNDE By whom built DESCHIMAG WERK: SEEBECK Yard No. 548 When built 1936Owners MAC LINE LTD Port belonging to LONDONElectric Light Installation fitted by WICHMANN & CO Contract No. When fitted 1936Is the Vessel fitted for carrying Petroleum in bulk noSystem of Distribution Two Wire SystemPressure of supply for Lighting 110 volts, Heating ✓ volts, Power 110 volts.Direct or Alternating Current, Lighting direct current Power direct currentIf alternating current system, state frequency of periods per second ✓Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off yesGenerators, do they comply with the requirements regarding temperature rise yes, are they compound wound yesare they over compounded 5 per cent. yes, if not compound wound state distance between each generator ✓Where more than one generator is fitted are they arranged to run in parallel no, is an adjustable regulating resistance fitted in series with each shunt field yesHave certificates of test results for machines under 100 kw. been submitted and approved yesHave machines over 100 kw. been inspected by the Surveyors during manufacture and testing ✓Are all terminals accessible, clearly marked, and furnished with sockets yes, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched yesAre the lubricating arrangements of the generators as per Rule yesPosition of Generators Engine room starb. side, is the ventilation in way of the generators satisfactory yesare they clear of all inflammable material yes if situated near unprotectedwoodwork or other combustible material, state distance of same horizontally from or vertically above the generators ✓ and ✓are the generators protected from mechanical injury and damage from water, steam or oil yes, are their axes of rotation fore and aft yesEarthing, are the bedplates and frames of the generating plant efficiently earthed yes are the prime movers and their respective generators in metallic contact yesMain Switch Boards, where placed Engine room starb. sideIf the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard ✓Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes yes, are they protected from mechanical injury and damage from water, steam or oil yesif situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards ✓ and ✓are they constructed wholly of durable, non-ignitable non-absorbent materials marbleis all insulation of high dielectric strength and of permanently high insulation resistance yesis it of an approved type yes, if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework yesis the non-hygroscopic insulating material of an approved type yesand is the frame effectively earthed yes Are the fittings as per Rule regarding:— spacing or shielding of live parts yesaccessibility of all parts yes, absence of fuses on back of board yes, temperature rise of omnibus bars yesindividual fuses to voltmeter, pilot or earth lamp yes, are moving parts of switches alive in the "off" position noare all screws and nuts securing connections effectively locked yes are any fuses fitted on the live side of switches noMain Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches for each generator a double pole linked change over switch and a fuse on each polefor each outgoing circuit a double pole switch and a fuse on each poleAre turbine driven generators fitted with emergency trip switch as per rule ✓ Are cupboards or compartments containing switchboards composed of fire-resisting material or lined with approved material yesInstruments on main switchboard 1 ammeters 2synchronising device for paralleling purposes. For compound machines is the ammeter connected on the opposite pole to equaliser connection ✓Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system 2 earth lampsSwitches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules yes are the fusible cutouts of an approved type yes have the reversed

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current protection devices been tested under working conditions yes Joint Boxes, Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per Rule yes

Cables: Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV, V, X or XI of the Rules yes

If the cables are insulated otherwise than as per Rule, are they of an approved type yes Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load about 5 Volts Cable Sockets, are the ends of all cables having a sectional

area of 0.04 square inch and above provided with soldering sockets yes Paper Insulated and Varnished Cambric Insulated Cables.

If conductors are paper or varnished cambric insulated, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound no paper insulated cables or waterproof insulating tape yes Cable Runs, are the cables fixed as far as possible in accessible positions

not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes Are cables in machinery spaces, galleys, laundries, bathrooms and lavatories lead covered or run in conduit lead covered

Support and Protection of Cables, state how the cables are supported and protected cables in exposed position are protected by string thus run plain. all cables are lead covered

If cables are run in wood casings, are the casings and caps secured by screws yes, are the cap screws of brass yes, are the cables run in separate grooves yes If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, are the cables and fittings in accordance with the special requirements yes

Joints in Cables, state if any, and how made, insulated, and protected watertight joint boxes

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made lead or hard wood

Earthing Connections, state what earthing connections are fitted and their respective sectional areas yes

are their connections made as per Rule yes

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes Emergency Supply, state position and method of control of the emergency supply and how the generator is driven yes

Navigation Lamps, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes, are the switches and fuses grouped in a position accessible only to the officers on watch yes

has each navigation lamp an automatic indicator as per Rule yes Secondary Batteries, are they constructed and fitted as per Rule none

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes, are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected none

are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected none

how are the cables led yes

where are the controlling switches situated yes are all fittings suitably ventilated yes, are all switches and lampholders constructed wholly of non-ignitable, non-absorbent materials yes

Heating and Cooking Appliances, are they constructed and fitted as per Rule yes, are air heaters constructed and fitted as per Rule yes

Searchlight Lamps, No. of 1, whether fixed or portable fixed, are their fittings as per Rule yes

Arc Lamps, other than searchlight lamps, No. of none, are their live parts insulated from the frame or case yes, are their fittings as per Rule yes

Motors, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from water, steam or oil yes are their axes of rotation fore and aft yes, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type yes

if not of this type, state distance of the combustible material horizontally or vertically above the motors yes and yes

have machines of over 100 BHP been inspected by the Surveyors during manufacture and testing yes Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes Lightning Conductors, where lightning conductors

are required, are these fitted as per Rule yes Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings yes

are all fuses of the filled 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 type approved by the Home Office yes

Spare Gear, if the vessel is for open sea service have spares been supplied as per Rule yes

PARTICULARS OF GENERATING PLANT.

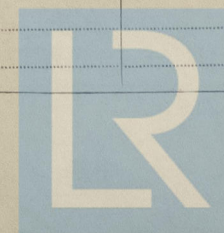
DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	1	8	115	69.5	450	Steam Engine		
AUXILIARY	1	4	115	35	1100	Diesel Engine	Diesel Oil	above 150° F.
EMERGENCY								
ROTARY TRANSFORMER								

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
	No. per Pole.	Total Nominal Area per Pole Sq. In.	No.	Diameter.	Circuit.	Rule.			
MAIN GENERATOR	1	35	19	1.53	69.5	8.3	12	rubber	lead covered and wire armoured.
EQUALISER CONNECTIONS									
AUXILIARY GENERATOR	1	10	19	0.82	35	3.7	15	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER									
ENGINE ROOM	1	1.5	1	1.38	3	7.8	15	"	"
BOILER ROOM	1	1.5	1	1.38	2.5	7.8	15	"	"
AUXILIARY SWITCHBOARDS									
Pratich apt	1	2.5	1	1.78	11	12.9	35	"	"
low	1	1.5	1	1.38	4.6	7.8	40	"	"
amid ship	1	16	19	1.04	44	46	50	"	"
Wheelhouse	1	10	19	0.82	27	3.7	10	"	"
ACCOMMODATION	1	1.5	1	1.38	3	7.8	15	"	lead covered
WIRELESS	1	6	19	0.64	20	3.1	14	"	lead covered and wire armoured
SEARCHLIGHT	1	1.5	1	1.38	5	7.8	10	"	"
MASTHEAD LIGHT	1	1.5	1	1.38	1	7.8	10	"	"
SIDE LIGHTS	1	1.5	1	1.38	1	7.8	10	"	"
COMPASS LIGHTS	1	1.5	1	1.38	0.5	7.8	10	"	"
POOP LIGHTS	1	1.5	1	1.38	1	7.8	70	"	"
CARGO LIGHTS	1	1.5	1	1.38	3.5	7.8	25	"	"
ARC LAMPS									
HEATERS									

MOTOR CONDUCTORS.

DESCRIPTION.	No. of Motors.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT.		Approximate Length. (Lead and Return.) Feet.	Insulated with	HOW PROTECTED.
		No. Per Pole.	Total Nominal Area per Pole Sq. In.	No.	Diameter.	In Circuit.	Rule.			
BALLAST PUMP										
MAIN BILGE LINE PUMPS										
GENERAL SERVICE PUMP										
EMERGENCY BILGE PUMP										
SANITARY PUMP										
CIRC. SEA WATER PUMPS										
CIRC. FRESH WATER PUMPS										
AIR COMPRESSOR										
FRESH WATER PUMP										
ENGINE TURNING GEAR										
ENGINE REVERSING GEAR										
LUBRICATING OIL PUMPS										
OIL FUEL TRANSFER PUMP										
WINDLASS										
WINCHES, FORWARD										
WINCHES, AFT										
STEERING GEAR—										
(a) MOTOR GENERATOR										
(b) MAIN MOTOR										
WORKSHOP MOTOR										
VENTILATING FANS										
Motor for live air pump	1	1	2.5	1	1.78	12	12.9	15	rubber	lead covered and wire armoured.



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All Conductors are of annealed copper conforming to British Standard Specification No. 7 (or International Electro-technical Commission Publication No. 28).

The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.

The foregoing is a correct description.

Wiechmann & Co
Wiechmann & Co

Electrical Engineers.

Date *Bremen, 30. Juli 36*

COMPASSES.

Distance between electric generators or motors and standard compass *5 m*

Distance between electric generators or motors and steering compass *7 m*

The nearest cables to the compasses are as follows:—

A cable carrying *7* Ampères *10* feet from standard compass *8* feet from steering compass.

A cable carrying *1* Ampères *2* feet from standard compass *2* feet from steering compass.

A cable carrying *0.2* Ampères *close to* feet from standard compass *close to* feet from steering compass.

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

Eas 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 *all* course in the case of the standard compass, and *nil* degrees on *all* course in the case of the steering compass.

Deutsche Schiffsbau-Gesellschaft

per [Signature]

per [Signature] Builder's Signature.

Date

Is this installation a duplicate of a previous case *yes* If so, state name of vessel *NORTHERN PRIDE*

General Remarks (State quality of workmanship, opinions as to class, &c. *This Electric Installation*)

has been made in accordance with the approved plans, the Secretary's letters and in conformity with the requirements of the Rules. All the conductors are of German Standards. Materials used in the construction and the workmanship are of good quality. This Installation has been tested on completion and found satisfactory in all respects.

Noted

Ymn

7.8.36

Total Capacity of Generators *12* Kilowatts.

The amount of Fee ... *RM 240,-* When applied for, *30.7.1936*

Travelling Expenses (if any) £ : : When received, *24.9.36* *24/9*

A. Carstensen
Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 11 AUG 1936*

Assigned

See Bmn. 7.6 1811



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