

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

JAN 20 1941

Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office.....13/11/41 Port of.....Newcastle-on-Tyne

No. in Survey held at.....Nillington Quay Date, First Survey.....27-9-40 Last Survey.....3-1-1941
Reg. Book. (Number of Visits.....5)

on the.....NORTHGATE Tons { Gross.....429
Net.....224

Built at.....Nillington Quay By whom built.....Clelands (Successors) Ltd. Yard No.....54 When built.....1941

Owners..... Port belonging to.....HULL

Electrical Installation fitted by.....Humber Elect. Co. Ltd. Contract No.....54 When fitted.....1941

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

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

Heating.....Power.....220 Direct or Alternating Current, Lighting.....Direct Power.....Direct 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..... 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 port side.

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.....Engine room port side forward

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.....Ebony 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

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.....25 Kw Generator -

two pole circuit breaker with 0/6 s time delay devices; other generators - double

pole quick break knife switches & double pole fuses.

and for each outgoing circuit.....Double pole quick break knife switches & double pole

fuses.

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.....Earth lamps coupled to earth via switches & fuses.

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	25	220	113.5	1200	Diesel	Above	150° F
	1	6	110	43	875	Diesel	"	"
	1	3	110	21.5	1250	Belt travel from tail shaft		
EMERGENCY ...								
ROTARY TRANSFORMER								

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	2	19/052	113.5	128 ✓	20'	V.I.R	In h.g. steel pipe
" " EQUALISER								
D.G. generator	6	1	19/052	43	64 ✓	20'	V.I.R	" " " "
Tail shaft generator.	3	1	7/044	21.5	21 ✓	80'	V.I.R	" " " "
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR								
MAIN DISTRIBUTION CABLES.								
AUX. SWITCHBOARDS AND SECTION BOARDS								

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.

W. E. Luntzworth Electrical Engineers. Date.....

COMPASSES.

Minimum distance between electric generators or motors and standard compass..... 40'

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

The nearest cables to the compasses are as follows:—

A cable carrying .14 Ampères ^{inside} ~~feet from~~ standard compass feet from steering compass.

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

FOR AND ON BEHALF OF
W. E. Luntzworth Builder's Signature. Date.....
DIRECTOR

Is this installation a duplicate of a previous case..... No If so, state name of vessel

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 installed under Special Survey. The workmanship and materials used are good. The running and compounding of the generator etc were tested. The insulation resistance of each circuit was measured, and found satisfactory. In my opinion, the installation is suitable for a diesel vessel.

Noted
L.P.
21/1/41.

Total Capacity of Generators..... 34 Kilowatts.
(Including Depausing gen. of 6 kw)

The amount of Fee ... £ 24 : 10 :
Travelling Expenses (if any) £ : :
When applied for, 13.6 JAN 1941
When received, 19.....

W. E. Luntzworth
Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 24 JAN 1941

Assigned..... See NWC 7E 99121