

## REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

13 JUL 1948

Date of writing Report... 5. 7. 1948. When handed in at Local Office... 12. 3. July 1948 Port of... Middlesbrough.

No. in Survey held at... Haverlön Hill-on-Tus. Date, First Survey... 12. 3. 48 Last Survey... 18. 6. 1948.  
Reg. Book. (Number of Visits... 11.)38869 on the... M. V. "BERGSUND". Tons {Gross... 1320  
Net... 118

Built at... Haverlön Hill-on-Tus. By whom built... Furness Shipbuilding Co. Yard No. 417 When built... 1948.

Owners... Mølleholm Rederi A/B Svea. Port belonging to... Mølleholm.

Electrical Installation fitted by... Furness Shipbuilding Co. Ltd.. Contract No. 417 When fitted... 1948.

Is vessel fitted for carrying Petroleum in bulk... no. Is vessel equipped with D.F. no E.S.D. yes Gy.C. yes Sub. Sig. -  
Radar - Trans only.

Have plans been submitted and approved... yes. System of Distribution... Two wire insulated Voltage of supply for Lighting... 220

Heating... - Power... 220 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... Port side of Engine Room, arranged fore and aft on

starting platform level, 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... arranged fore and aft, facing starboard side,

next to generators adjacent to shell of vessel.

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... Sindano (Ebony finish), 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... Triple Pole Air Break

Circuit Breaker with no volt coil, Overload coils on two poles, and Reverse Current

coil, Time delay (Rotherham) being fitted to the Overload coil trips.

and for each outgoing circuit... Double Pole Single Throw Quick Break Knife Switch and

Double Pole Fuses.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule... yes. Instruments on main switchboard... 5

ammeters... 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 coupled to 'E' thro switches + 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... 25%, are the reversed current

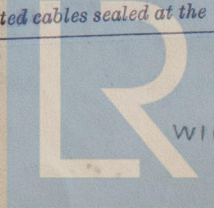
protection devices connected on the pole opposite to the equaliser connection... yes, have they been tested under working conditions, and at what current

did they operate... 10% 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... 413.2v, 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.





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 ...	3	40	220	182	1100	Diesel Engine	Heavy Oil	Above 150° F.
EMERGENCY ...	1	15	220	68	1100	Diesel Engine.	Heavy Oil	Above 150° F.
ROTARY TRANSFORMER								

### MAIN DISTRIBUTION CABLES.

LIGHTING AND HEATING, ETC., CABLES.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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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 FURNESS SHIPBUILDING CO. LIMITED

*Burman*

Asst. Electrical Engineer

Date *6.7.48*

#### COMPASSES.

Minimum distance between electric generators or motors and standard compass *10 feet.*  
Minimum distance between electric generators or motors and steering compass *10 feet (Projector type Binnacle on wheel/bas. top).*

The nearest cables to the compasses are as follows:—

A cable carrying *0.18* Ampères *inside* ~~feet~~ 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 ..... degrees on ..... course in the case of the steering compass.

*For Furness Shipbuilding Co. Ltd.*  
*W. S. Butterworth, Master*

Builder's Signature.

Date

*6 July 1948*

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

Plans. Are approved plans forwarded herewith *no.* If not, state date of approval *16/6/47 & 25/2/48*

Certificates. Are certificates of test for motors engaged on essential services and generators forwarded herewith *Yes. (see attached letters)*

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 and the arrangements are in accordance with or equivalent to those shown on the approved plans and the Society's Rules for Electrical Equipment.*

*The materials used are of good quality and the workmanship is good.*

*On completion the equipment was operated under working conditions, the protective devices of the circuit breakers were operated and adjusted and the insulation resistance of all circuits measured and found good.*

*This installation is in my opinion suitable for a classed vessel.*

*Noted Ent 27/7/48*

Total Capacity of Generators *135* Kilowatts.

The amount of Fee ... *£60 : 5 :* When applied for, *12-7-1948*

Travelling Expenses (if any) £ : : When received, *19*

*Wm. H. H. H.*

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

*30 JUL 1948*

Assigned

*Sir F. E. M. M. M. M. M.*