

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

30 MAY 1939

Date of writing Report... 23<sup>rd</sup> 5-1939. When handed in at Local Office... 19... Port of... Rotterdam

No. in Survey held at... Heusden Date, First Survey... 10-2-39 Last Survey... 16-5-1939  
Reg. Book. (Number of Visits... 4)

on the... m.v. "KYLE FISHER" Tons { Gross 608.32  
Net 366.03

Built at... Heusden By whom built... De Haan & Oerlemans Yard No... 205 When built... 1938-39

Owners... James Fisher & Sons, Ltd. Port belonging to... Barrow

Electrical Installation fitted by... C. Clewlyse & Co. Contract No... When fitted... 1939

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 conductor insulated Voltage of supply for Lighting... 220

Heating... Power... 220 Direct or Alternating Current, Lighting... A.C. Power... A.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... yes 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

positive pole 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 engineroom on portside & starboard side of main engine 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... in engineroom portside

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... only small panels of synthetic material 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

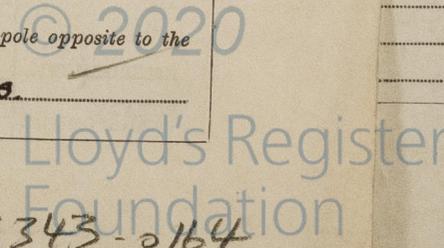
Is the construction as per Rule... yes including accessibility of parts... yes absence of fuses on the back of the board... yes individual fuses to pilot and earth lamps, voltmeters, etc... yes locking of screws and nuts... yes labelling of apparatus and fuses... yes fuses on the "dead" side of switches... yes

Description of Main Switchgear for each generator and arrangement of equaliser switches... a triple pole contactor with reversed current tripping & double pole fuses

and for each outgoing circuit... a double pole rotary switch & double pole fuses

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

ammeters... 3 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... one pair of earth fault indicating lamps



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... yes, have they been tested under working conditions... yes. 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... 1.5 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 exposed ends... ✓ 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... yes, if so, are they adequately protected... yes. Are cables in machinery spaces, galleys, laundries, etc., lead covered... yes or run in conduit... yes. State how the cables are supported and protected... Cables in machinery space and in accommodation and on decks are clipped to steel work or wood work of vessel by metal clips - cables through cargo hold are run in conduit.

Are all lead sheaths, armouring and conduits effectually bonded and earthed... yes. Refrigerated chambers, are the cables and fittings as per Rule... ✓. 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 effectively bushed... yes and with what material... Lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule... yes. 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... yes, are they adequately ventilated... yes. 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... none, if so, how are they protected... ✓.

and where are the controlling switches fitted... ✓, are all fittings suitably ventilated... yes, are all fittings and accessories constructed and installed as per Rule... yes. Searchlight Lamps, No. of... ✓, whether fixed or portable... ✓, are their fittings as per Rule... ✓. 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... ✓. 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. Lighting Conductors, where required are they fitted as per Rule... steel mesh. 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... ✓, are all fuses of the cartridge type... ✓.

are they of an approved type... ✓. If portable lamps for use in dangerous spaces are supplied, are they of a self-contained battery-fed flameproof type... ✓. 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.

DESCRIPTION OF GENERATOR.	No. of	RATED AT			DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.		Revs. per Min.	Fuel Used.
MAIN ...	2	8	220	36.5	1100	oil engine	diesel oil Above 150°F.
EMERGENCY ...							
ROTARY TRANSFORMER							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return lead) in ft.	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area of Stranded or Solid Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR ...	8	1	2.5	36.5	63	58.2	rubber	Lead sheath & steel wire braiding.
" " EQUALISER ...		1	10		38	24.6	"	"
EMERGENCY GENERATOR ...								
ROTARY TRANSFORMER: MOTOR								
" " GENERATOR ...								

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return lead) in ft.	INSULATED WITH.	HOW PROTECTED.
AUX. SWITCHBOARDS AND SECTION BOARDS ...						
Navigation board	1	4	2	22.5	30	"

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return lead) in ft.	INSULATED WITH.	HOW PROTECTED.
WIRELESS (for battery charging only)	1	6	9.5	29	30	"
NAVIGATION LIGHTS (5 circuits)	1	2.5	2	15.5	10-24-30	through hold in conduit.
LIGHTING AND HEATING						
Engine room Lighting (2 circuits)	1	2.5	1.5	16.5	24-34	lead sheath & steel wire braiding.
5 Lighting circuits	1	2.5 supply 1.8 lighting	1.5	9.5	30	" at lead covered.
Lighting foreship	1	2.5	1.4	16.5	110	through hold in conduit.

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	CONDUCTORS.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return lead) in ft.	INSULATED WITH.	HOW PROTECTED.	
Lubricating oil pump	1	5.5	1	6	22.1	29	24	lead sheath & steel wire braiding.
Motor generator for charging starter batteries.	1	1.1	1	2.5	4.6	15.5	3	"
Capstan	1	7	1	10	29	38	34	"

