

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office.....

APR 12 1940

Date of writing Report... 4th Mar. 1940 When handed in at Local Office... 4th Mar. 1940 Port of... Hongkong
 No. in Survey held at... Hongkong Date, First Survey... Dec 5th 1939 Last Survey... March 2nd 1940
 Reg. Book. (Number of Visits... 15) Gross... 1341.90
Single Screw Steamer "KARUAH" Tons { Net... 514.55

Built at... Hongkong By whom built... The H.K. Whampoa Dock Co. Ltd Yard No. 819 When built... 1940
 Owners... The Newcastle & Hunter River Steamship Co. Ltd Port belonging to... Newcastle, N.S.W.
 Electrical Installation fitted by... The Hongkong & Whampoa Dock Co. Ltd Contract No. ✓ When fitted... 1940
 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 Wires Voltage of supply for Lighting... 110

Heating... 110 Power... 110 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... Yes, are shunt field regulators provided... Yes Is the compound winding connected to the negative or positive pole

positive 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... Star side of engine 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... Star side of engine 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... Ebony Sindang, if of synthetic insulating material is it an Approved Type... ✓, 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... one 200 amps. T.P.

circuit breaker + one 150 amps. T.P. circuit breaker, both provided with overload and

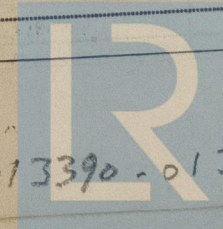
reverse current trips. Equaliser mechanically interlocked.

and for each outgoing circuit... 2 - 100 amps. D.P. knife switches + 6 - 60 amps. D.P. knife switches

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... Yes Earth Testing, state means provided... Earth lamps.



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and where are the controlling switches fitted....., are all fittings suitably ventilated.....

are all fittings and accessories constructed and installed as per Rule..... 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..... and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil....., 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.....

..... Control Gear and Resistances, are they constructed and fitted as per Rule.....

..... 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....., are they suitably stored in dry situations.....

Insulation Tests, has the insulation resistance of all circuits and apparatus been megger tested and found satisfactory.....

PARTICULARS OF GENERATING PLANT.								
DESCRIPTION OF GENERATOR.	No. of	RATED AT			Revs. per Min.	DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Ampères.			Fuel Used.	Flash Point of Fuel.
MAIN ...	1	20	110	182	550	steam Engine	✓	✓
EMERGENCY ...	1	12	110	109	1000	20-BHP oil engine	Diesel oil	above 150° F.
ROTARY TRANSFORMER								

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.					
				In the Circuit.	Rate.			
MAIN GENERATOR	20	1	0.2 ^{sq}	182	296✓	50'	V.C.	LC+A
" " EQUALISER		1	0.1 ^{sq}		191✓	23'	V.C.	LC+A
Emergency "	12	1	0.1 ^{sq}	109	191✓	50'	V.C.	LC+A
" " Equaliser		1	0.06 ^{sq}		135✓	25'	V.C.	LC+A
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR								
GENERATOR								

MAIN DISTRIBUTION CABLES. To Section Boxes

AUX. SWITCHBOARDS AND SECTION BOARDS
Radiators	Mains	1	·06 ^{sq}	72	135	70'	V.C.	L.C+A	
Motors	"	1	·075 ^{sq}	93·6	157	80'	V.C.	L.C+A	
Engine + Boiler Rooms	"	1	·0225 ^{sq}	26	75	80'	V.C.	L.C+A	
Upper + 2 nd Deck	"	1	·01 ^{sq}	26·4	42	70'	V.C.	L.C+A	
Bridge + Poop Dk.	"	1	·01 ^{sq}	26·0	42	70'	V.C.	L.C+A	
Cargo + Hold Its.	"	1	·0145 ^{sq}	34·6	57	400'	V.C.	L.C+A.	
Navigation	"	1	·003 ^{sq}	1·8	10	200	V.I.R.	L.C+A and L.C.	

LIGHTING AND HEATING, ETC., CABLES. *From Section boxes to Fuse Boxes.*

[illegible]

MOTOR CABLES. From Section Boxes

[illegible]

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. HONGKONG & WHAMPOA DOCK Co., Ltd.

Heock.
CHIEF MANAGER Electrical Engineers.

Date 6-3-40

COMPASSES.

Minimum distance between electric ~~generators or~~ motors and standard compass 28 ft

Minimum distance between electric ~~generators or~~ motors and steering compass 20 ft

The nearest cables to the compasses are as follows:—

A cable carrying .25 Ampères Compass Light feet from standard compass Compass Light feet from steering compass.

A cable carrying .40 Ampères ✓ feet from standard compass 8 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 any course in the case of the standard compass, and nil degrees on any course in the case of the steering compass.

HONGKONG & WHAMPOA DOCK Co., Ltd.

Builder's Signature.

Date 6-3-40

Heock.
CHIEF MANAGER

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.)

This electric equipment has been efficiently fitted on board in accordance with the rules & approved plans & the materials & workmanship are good.

On completion the installation was megger tested & tried under full load conditions & found satisfactory.

6 certificates for generators enclosed.

Makers' test certificates for Mechanical Stokers Motor & Thermotank Motor were not delivered here:—

Stoker Motors:— The English Electric Co. Ltd N^o 540596/1 + 2; Size A C B 9.

Thermotank Motor:— Thermotank Ltd N^o 89609; Unit N^o 25136.

Total Capacity of Generators 32 Kilowatts.

The amount of Fee ... £ 66 = \$ 745: When applied for, 4th Mar. 1940

Travelling Expenses (if any) \$ 25: When received, 2.5.1940
Total \$ 770

FNL 10 APR 1940

Committee's Minute

Assigned

See HKG 3rd 8541

J. S. Morrison
Surveyor to Lloyd's Register of Shipping.