

REPORT ON OIL ENGINE MACHINERY.

No. 3152

Received at London Office

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Date of writing Report 13th May, 1931 When handed in at Local Office

Port of SHANGHAI, CHINA.

No. in Survey held at SHANGHAI
Reg. Book.

Date, First Survey 23rd Sept., 1930 Last Survey 6th May, 1931.

Number of Vistas 23

on the ^{Single}
^{Twin}
^{Triple}
^{Quadruple} Screw vessel "HO KWANG"Tons { Gross 685
Net 383

Built at SHANGHAI By whom built New Eng. & Shipbldg. Wks. Ltd. Yard No. 687 When built 1931.

Engines made at Keighley, England. By whom made H. Widdop & Co., Ltd. Engine No. 2958 When made 1931.

Donkey Boilers made at SHANGHAI By whom made New Eng. & Shipbldg. Wks. Ltd. Boiler No. 689 When made 1931.

Brake Horse Power 600 total Owners Asiatic Petroleum Co. (North China) Ltd. belonging to SHANGHAI

Nom. Horse Power as per Rule 171 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended River purposes.

OIL ENGINES, &c.—Type of Engines Vertical, Solid injection, Revers- 2 or 4 stroke cycle 2 Single or double acting Single
ing, Air Starting

Maximum pressure in cylinders 600 lb. Diameter of cylinders 11½" Length of stroke 13½" No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank Yes

Revolutions per minute 330 Flywheel dia. 40" Weight 20½ cwts. Means of ignition Compression Kind of fuel used Heavy Oil

Crank Shaft, dia. of journals as per Rule — Crank pin dia. — Crank Webs Mid. length breadth — Thickness parallel to axis —
as fitted — Mid. length thickness — shrunk Thickness around eye-hole —Flywheel Shaft, diameter as per Rule — Intermediate Shafts, diameter as per Rule 3.69" Thrust Shaft, diameter at collars as per Rule 4½
as fitted — as fitted 5" as fitted —Tube Shaft, diameter as per Rule — Screw Shaft, diameter as per Rule 5-5/8" Is the { tube } shaft fitted with a continuous liner { No
as fitted — as fitted — screw }Bronze Liners, thickness in way of bushes as per Rule — Thickness between bushes as per rule — Is the after end of the liner made watertight in the
as fitted — as fitted —

propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after
end of the tube shaft Yes Length of Bearing in Stern Bush next to and supporting propeller 2'-3-5/8"

Propeller, dia. 5'-0" Pitch 3'-10½" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 10.5 sq. feet

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
Forced Thickness of cylinder liners Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water-cooled or lagged withnon-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Led up
Cooling Water Pumps, No. One on each engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes funnel

Bilge Pumps worked from the Main Engines, No. 1 each engine Diameter 3½" Stroke 3" Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size Condenser, cir. pump 6" x 6" x 6"
How driven Steam

Ballast Pumps, No. and size 1, 5½" x 4½" x 5" Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
Pumps, No. and size:—In Machinery Spaces Cir. pump 6"x 6"x 6". Feed pump 4"x 6"x 7". Gen Ser. pump 6"x 4"x 6". Trans-
fer pump 3"x 2"x 3"

In Holds, &c. Cargo Oil Pumps 8"x 8½"x 10". Ballast Pump (Deck) 5½"x 4½"x 5"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One pump 6" x 6" x 6" Dia. of Bilge suction 3"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks. Valves

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

What pipes pass through the bunkers None How are they protected

What pipes pass through the deep tanks Have they been tested as per Rule Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
compartment to another. Yes Is the Shaft Tunnel watertight No Is it fitted with a watertight door worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. One, each Engine No. of stages 2 Diameters 2½ & 6" Stroke 3 Driven by Main Engine

Auxiliary Air Compressors, No. 1, Reavall's C.S.A. 6 type, Capacity 45 cu.ft. free air per min, compressing to 500 lb. per square inch. Driven by Steam Engine

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule
as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes Removable plugs

Can the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces. Yes

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint (237030, 237031, 237032) Range of tensile strength Working pressure by Rules

Starting Air Receivers, No. 237033, 237034, Total cubic capacity 43.5 cu.ft. Internal diameter 1'-0½" thickness

Seamless, lap welded or riveted longitudinal joint 239029.) Seamless Material Steel Range of tensile strength Working pressure by Rules 460 sq. ins. W.P.

010229-010235-0199

IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? Yes

PLANS. ~~Are approved plans forwarded herewith for Shifting~~ From Kobe Office Receivers Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

As per Manchester Report No.7151.

The foregoing is a correct description,

A. P. Blechman

Manufacturer.

Dates of Survey while building
During progress of work in shops-- 23-9-30, 1-10-30, 20-10-30, 11-11-30, 26-11-30, 5-12-30, 16-12-30, 19-12-30, 27-6-1-31, 10-1-31, 20-1-31, 2-2-31, 11-2-31, 12-2-31.
During erection on board vessel-- 19-2-31, 28-2-31, 14-3-31, 23-3-31, 27-3-31, 10-4-31, 17-4-31, 6-5-31.
Total No. of visits 23

Dates of Examination of principal parts--Cylinders - Covers - Pistons - Rods - Connecting rods -
Crank shaft - Flywheel shaft - Thrust shaft - Intermediate shafts 1-10-30 Tube shaft -
Screw shaft 23-9-30 Propeller 14-2-31 Stern tube 11-2-31 Engine seatings 19-12-30 Engines holding down bolts 28-2-31
Completion of fitting sea connections 12-2-31 Completion of pumping arrangements 15-4-31 Engines tried under working conditions 6-5-31
Crank shaft, Material - Identification Mark - Flywheel shaft, Material - Identification Mark -
Thrust shaft, Material - Identification Mark - Intermediate shafts, Material Mild Steel Identification Marks No.687
Tube shaft, Material - Identification Mark - Screw shaft, Material Mild Steel Identification Mark No.687

Is the flash point of the oil to be used over 150° F. Yes

Is this machinery duplicate of a previous case - If so, state name of vessel -

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

The Machinery of this vessel has been installed in accordance with the Rules and approved plans.
The materials and workmanship as far as can be ascertained have been found good. The machinery finally examined under full service conditions and found satisfactory.
It is Recommended that the records of + LMC 5,31, (OG), Electric Light fitted be made in the Register Book in the case of this vessel. (See Manchester report No.7151 for full particulars of main engines.)

Certificate (if required) to be sent to

The amount of Entry Fee ... \$ 45.00 : When applied for,
Special ... \$ 550.00 : 8-5-19 31
Donkey Boiler Fee ... \$ 200.00 : When received,
Travelling Expenses (if any) \$ 100.00 : 12-5-19 31

Committee's Minute

Assigned

+ L.M.C. 5,31

O.G.

J. Brooke Smith

Engineer Surveyor to Lloyd's Register of Shipping.



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