

RECEIVED

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 1233

Received at London Office

29 DEC 1947

Date of writing Report Nov. 3rd, 1947 When handed in at Local Office

Port of Cleveland, Ohio.

No. in Survey held at Cleveland, Ohio. Date, First Survey Jan. 29th, Last Survey May 23rd, 1947.  
Reg. Book. M.V. CHING MEN. Number of Visits 20

Single  
on the Twin } Screw vessel Ming Sung Industrial Co. Ltd., Order No. 1109.  
Triple } (160' Yangtze River Freight & Passenger Vessels)  
Quadruple }

Built at - By whom built - Yard No. - When built -

Engines made at Cleveland, Ohio. By whom made General Motors Corp., Cleveland Diesel Eng. Div. Engine No. 50576 P 50577 S When made 1947-5

Donkey Boilers made at - By whom made - Boiler No. - When made -

Brake Horse Power 925 (each) Owners Ming Sung Industrial Co. Ltd. Port belonging to -

Nom. Horse Power as per Rule - Is Refrigerating Machinery fitted for cargo purposes. - Is Electric Light fitted. -

Trade for which Vessel is intended -

OIL ENGINES, &c.—Type of Engines Diesel, Main Propulsion, Port & Starboard. 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 1050 lbs. Diameter of cylinders 8-3/4" Length of stroke 10-1/2" No. of cylinders 12 No. of cranks 6

Mean Indicated Pressure 112 lbs. Is there a bearing between each crank Yes

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 11-3/4" Solid Injection Kind of fuel used Heavy Oil

Revolutions per minute 750 Flywheel dia. - Weight - Means of ignition Solid Injection Kind of fuel used Heavy Oil

Crank Shaft, { Solid forged as per Rule - Crank pin dia 6-1/4" Crank Webs Mid length breadth 9-1/2" Thickness parallel to axis -  
Semi built dia. of journals as fitted 7-1/4" Mid length thickness 2-9/16" Thickness around eyehole -  
All built as fitted -

Flywheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as per Rule -

Tube Shaft, diameter as per Rule - Screw Shaft, diameter as per Rule - Is the { tube } shaft fitted with a continuous liner { -  
as fitted - as fitted - as fitted - as fitted - as fitted - as fitted -

21, 24, 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

2, May, If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -

9-5/23, 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 -

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

aft - If so, state type - Length of Bearing in Stern Bush next to and supporting propeller -

3, Propeller, dia. - Pitch - No. of blades - Material - whether Moveable - Total Developed Surface - sq. feet

Method of reversing Engines Reverse Reduction Gears Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication

4844, Forced Thickness of cylinder liners 1 1/2" Space Comb. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

4819, non-conducting material - If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine -

1 (each) Fresh 300 GPM @ 33 lbs. & 1 (each) Salt 325 GPM

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AIR RECEIVERS:—Have they been made under survey

State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

Injection Air Receivers, No. Cubic capacity of each

Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material

Range of tensile strength Working pressure

Starting Air Receivers, No. Total cubic capacity

Internal diameter thickness

Seamless, lap welded or riveted longitudinal joint Material

Range of tensile strength Working pressure

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

Receivers Separate Fuel Tanks

Donkey Boilers General Pumping Arrangements

Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

### SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied See list attached hereto. (See Rpt. #1232.)

REDUCTION GEARS: (Fitted to each engine) Manufactured by the Falk Corp., Milwaukee, Wis.

Single reduction reverse gear with Airflex Clutch. Ratio of reduction 2.5:1. Engine speed 750 RPM and propeller shaft speed 300 RPM. Main pinion pitch circle 13.65" and shaft diameter at bearing 5.91" with 2-1/2" diameter hole. Main gear pitch circle 34.35" and shaft diameter at bearing 7.75"

The foregoing is a correct description

Manufacturer.

Dates of Survey while building During progress of work in shops - Jan. 29; Feb. 3, 4, 5, 6, 8, 18; March 12; April 18, 23, 24, 30; May 1, 2, 8, 9, 15, 16, 21, 23, 1947. During erection on board vessel - All engines on this order were manufactured on a mass-production system. Dates indicate all visits to works up to and including final inspection of Engines #50574-50577. Total No. of visits (20)

Dates of Examination of principal parts—Cylinders 1/29-5/23-47 Covers 1/29-5/23 Pistons 1/29-5/23 Rods - Connecting rods 1/29-5/23

Crank shaft 1/29-5/23-47 Flywheel shaft - Thrust shaft - Intermediate shafts - Tube shaft -

Screw shaft - Propeller - Stern tube - Engine seatings - Engines holding down bolts -

Completion of fitting sea connections - Completion of pumping arrangements - Engines tried under working conditions -

Crank shaft, Material Forged Steel Identification Mark 5677 (P) 5298 (S) Flywheel shaft, Material Identification Mark -

Thrust shaft, Material Identification Mark - Intermediate shafts, Material Identification Marks -

Tube shaft, Material Identification Mark - Screw shaft, Material Identification Mark -

Identification Marks on Air Receivers -

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

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. These engines were constructed under Special Survey in accordance with the Rules and approved plans also to the Rule requirements of the American Bureau of Shipping. The gear forgings were tested at the place of manufacture by American Bureau of Shipping surveyors only and their certificates, on examination, were found in order.

The following tests on the main engines and gears were witnessed with satisfactory results, by the undersigned:- Full load ahead and astern. Regulating and overspeed governor tests. Reversals to check controls and clutches. Post trial visual inspection of engines and gears.

When the engines have been installed and tested under working conditions, in accordance with requirements of the Rules, the vessel in which they are fitted will be eligible, in my opinion, to have notation LMC (with appropriate date) in the Register Book.

Attached to this report are crank shaft forging reports 7.

TO BE CREDITED TO CLEVELAND

The amount of Entry Fee £ 508.00 : When applied for, 18-3-49  
Special £ :  
Donkey Boiler Fee £ :  
Travelling Expenses (if any) £ 28.00 : When received, 19

Committee's Minute

Assigned Transmit to London -

G. Drummond  
Engineer Surveyor to Lloyd's Register of Shipping

M. P. Clark  
Acting Surveyor to Lloyd's Register

Lloyd's Register  
Foundation

NEW YORK DEC 3 1947