

Rpt. 4b

- 9 DEC. 1960

and give  
possible.

Date of writing report: 4th April, 1960

Received London

Port

KOBE

No. FE-7689

Innoshima &amp; Hiroshima, Japan

In shops 56

10th Nov., 1959.

21st March, 1960.

Survey held at

No. of visits

On vessel

First date

Last date

## FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

Name RUNG TEZA

Gross tons

Hull built at Hiroshima, Japan

Managers Ujina Shipbuilding Co., Ltd.,  
By Hiroshima, Japan

Port of Registry

Year Month

Main Engines made at Innoshima, Japan

By Hitachi Shipbuilding & Eng. Co., Ltd.,  
Innoshima Shipyard

Yard No. 351

When

Eng. No. 2130

When 1960-3

Gearing made at

By

Donkey boilers made at

By

Blr. Nos.

When

Machinery installed at Hiroshima, Japan

By Ujina Shipbuilding Co., Ltd., Hiroshima, Japan

When

Particulars of restricted service of ship, if limited for classification

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? No

Is ship intended to carry petroleum in bulk? No

Is refrigerating machinery fitted? No

If so, is it for cargo purposes?

Type of refrigerant

Is the refrigerating machinery compartment isolated from the propelling machinery space?

Is the refrigerated cargo installation intended to be classed?

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines 1

No. of propellers 1

Brief description of propulsion system 7 cyl. 2SCSA direct connected

MAIN RECIPROCATING ENGINES. Licence Name and Type No. Burmeister &amp; Wain Alpha 497R

No. of cylinders per engine 7

Dia. of cylinders 290 mm

stroke(s)

490 mm

2 or 4 stroke cycle 2

Single or double acting Single

Maximum approved BHP per engine 840 BHP

at 310

RPM of engine and 310

RPM of propeller.

Corresponding MIP 6.5 kg/cm<sup>2</sup>

(For DA engines give MIP top &amp; bottom)

Maximum cylinder pressure 60 kg/cm<sup>2</sup>

Machinery numeral

168

Are the cylinders arranged in Vee or other special formation? No

If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? No

If so, how are upper pistons connected to crankshaft?

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? Ports in cyl.

No. and type of mechanically driven scavenge pumps or blowers per

engine and how driven One, Tandem type scavenge pump

No. of exhaust gas driven scavenge blowers per engine

Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

If a stand-by or emergency pump or blower is fitted, state how driven

No. of scavenge air coolers

Scavenge air pressure at full

power 0.13 kg/cm<sup>2</sup>

Are scavenge manifold explosion relief valves fitted? Yes

FOUR STROKE ENGINES. Is the engine supercharged? No

Are the undersides of the pistons arranged as supercharge pumps?

No. of exhaust gas driven blowers per

engine

No. of supercharge air coolers per engine

Supercharge air pressure

Can engine operate without supercharger?

TWO &amp; FOUR STROKE ENGINES-GENERAL. No. of valves per cylinder: Fuel 1

Inlet None

Exhaust None

Starting 1

Safety 1

Material of cylinder covers Cast iron

Material of piston crowns Cast Iron

Is the engine equipped to operate on heavy fuel oil? Yes

Cooling medium for : Cylinders Fresh water

Pistons Lub. Oil

Fuel valves Oil fuel

Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? No

Is welded construction employed for: Bedplate? No

Frames? No

Entablature? No

Is the crankcase separated from the

underside of pistons? No

Is the engine of crosshead or trunk piston type? Trunk

Total internal volume of crankcase 4.5 M<sup>3</sup>

No. and total area of explosion relief

devices 2 x 181.5 cm<sup>2</sup>

Are flame guards or traps fitted to relief devices? Yes

Is the crankcase readily accessible? Yes

If not, must the engine be removed for

overhaul of bearings, etc? No

Is the engine secured directly to the tank top or to a built-up seating? seating

How is the engine started? Compressed air

Can the engine be directly reversed? Yes

If not, how is reversing obtained?

Has the engine been tested working in the shop? Yes

How long at full power? 5 hours

CRANK &amp; FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 21st March, 1960

State barred speed range(s), if imposed

for working propeller None

For spare propeller

Is a governor fitted? Yes

Is a torsional vibration damper or detuner fitted to the shafting? No

Where positioned?

Type

No. of main bearings 8

Are main bearings of ball or roller

type? No

Distance between inner edges of bearings in way of crank(s) 385 mm

Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) Semi-built

Diameter of journals 200 mm

Diameter of crankpins

Centre 195 mm

Breadth of webs at mid-throw 370 mm

Axial thickness of webs 110 mm

If shrunk, radial thickness around eyeholes 116 mm

Are dowel pins fitted? No

Crankshaft material Journals Forged steel

Minimum 44 kg/mm<sup>2</sup>

Diameter of flywheel 900 mm

Weight 1,670 kgs

Are balance weights fitted? No

Total weight 1,670 kgs

Radius of gyration 226.5 mm

Diameter of flywheel shaft 180 mm

Material

Forged steel

Minimum approved tensile strength 44 kg/mm<sup>2</sup>

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) Integral with thrust shaft.

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# GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

This engine has been constructed under Special Survey in accordance with the Rules, approved plans and Secretary's letters.

The material and workmanship are sound and good.

The engine has been examined under full working condition in the shop and found satisfactory.

Engine Surveyor to Lloyd's Register of Shipping.

PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

Connecting  
RODS

LLOYD'S KOB HC-F 1048-A to G SH LR 18-2-60

CRANKSHAFT

Journal: Between webs - LLOYD'S KOB HC-F1129-A to D  
SH LR 15-12-59

Pump side: LLOYD'S KOB HC-F1019  
SH LR 15-12-59

FLYWHEEL SHAFT

Fly wheel side: LLOYD'S KOB R-633-A, B SH LR 8-1-60  
Webs: LLOYD'S KOB 56203-1 to 7 SH LR 15-12-59

THRUSTSHAFT

GEARING

INTERMEDIATE SHAFTS

SCREW AND TUBE SHAFTS

PROPELLERS

OTHER IMPORTANT ITEMS

Piston Pins: LLOYD'S KOB Y-15138-A to G SH LR 18-2-60

Is the installation a duplicate of a previous case?

No

If so, state name of vessel

Date of approval of plans for crankshaft 12th Dec., '59

Straight shafting 11th Feb., '60

Gearing

Clutch

Separate oil fuel tanks

Pumping arrangements

Oil fuel arrangements

Cargo oil pumping arrangements

Air receivers

Donkey boilers

Dates of examination of principal parts:—

Fitting of stern tube

Fitting of propeller

Completion of sea connections

Alignment of crankshaft in main bearings

Engine chocks & bolts

Alignment of gearing

Alignment of straight shafting

Testing of pumping arrangements

Oil fuel lines

Donkey boiler supports

Steering machinery

Windlass

Date of Committee

FRIDAY 10 FEB 1961

Decision

See Rpt. 1.

Special Survey Fee

Construction

£103.125.-

Expenses

Date when A/c rendered

APR 16 1960 (KOB)