

REPORT ON OIL ENGINE MACHINERY

No. 595-A

24 MAR 1952

Received at London Office

Report 11th June 1951 When handed in at Local Office 19 Port of Kobe & Yokohama
Survey held at Kobe, Japan Date, First Survey 27th January 1951 Last Survey 29th Oct. 1951
Number of Visits 45
Tons {Gross 395.18
Net 245.21
Screw vessel M.V. "BANDON I"
Nagasaki Japan By whom built Nansai Shipyard & Engine Works
Kobe By whom made Hanshin Internal Combustion Engine Mfg. Co., Ltd.
Boiler No. — When made —
250 X 2 (METRIC) Owners Thai Navigation Co., Ltd.
Port belonging to Bangkok
Rule 58 X 2 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
vessel is intended

NES, &c. — Type of Engine 45CSA 2 or 4 stroke cycle 4 Single or double acting Single
Pressure in cylinders 50 kg/cm² Diameter of cylinders 250 mm Length of stroke 380 mm No. of cylinders 6 No. of cranks 6
Pressure 6.5 kg/cm² Ahead Firing Order in Cylinders 1-5-3-6-2-4
Span of bearings, adjacent to the crank, measured to inner edge 324 mm Is there a bearing between each crank yes Revolutions per minute 380

Weight 560 Kgs Moment of inertia of flywheel 66.5 X 10⁴ Means of ignition Compression Kind of fuel used Diesel oil
dia. of journals 145.5 mm Crank pin dia 156 mm Crank webs 240 mm Thickness parallel to axis —
as fitted 156 mm Mid. length thickness 85 mm Thickness around eyehole —

Intermediate Shaft, diameter 93.44 mm Thrust Shaft, diameter at collars 160 mm
Screw Shaft, diameter 107.44 mm Is the shaft fitted with a continuous liner no
as fitted 120 mm

Thickness in way of bushes 10.7 mm Thickness between bushes 11.5 mm Is the after end of the liner made watertight in the
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner no

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-
If two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after
shaft no If so, state type Length of bearing in Stern Bush next to and supporting propeller 500 mm

dia. 1400 mm Pitch 1030 mm No. of blades 4 Material Manganese Steel whether moveable Solid Total developed surface 233.5 sq. feet
Inertia of propeller 22.5 X 10⁴ Kind of damper, if fitted —

reversing Engines Clutch and Reverse Gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of
forced Thickness of cylinder liners — Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled
with non-conducting material Bath If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
engine — Cooling Water Pumps, No. 4 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

ps worked from the Main Engines, No. 1 each Eng. Diameter 80 mm Stroke 3.0 mm Can one be overhauled while the other is at work —
connected to the Main Bilge Line {No. and size 2 X 2.5 1/2 in X 80 in 2 X 2.5 1/2 in X 70 in
How driven by main Engines 5 HP D.C. motors

g n led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
1 X 1 HP motor driven 2 1/2 in (St. by)

umps, No. and size 1 X 5 HP motor (24.5 1/2 in) Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 X plunger pump X 1 in driven by
dependent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary
No. and size: In machinery spaces 4, 1 X 100 mm, 1 X 70 mm, 2 X 50 mm In pump room —

nt Power Pump Direct Suctions to the engine room bilges, No. and size 3, 1 X 100 mm, 1 X 50 mm, 1 X 50 mm (hand pump)
bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction pipes in the machinery spaces led from easily
ad-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks yes Are they fixed
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

ch 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 —
pass through the bunkers — How are they protected —

pass through the deep tanks — Have they been tested as per Rule —
pes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes

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
from one compartment to another yes Is the shaft tunnel watertight — Is it fitted with a watertight door — worked from —

nd vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork —
Air Compressors, No. — No. of stages — diameters — stroke — driven by —
Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 1.5", 4.25" stroke 3" driven by 50 HP Diesel Engine

Provision is made for first charging the air receivers Small Auxiliary Air Compressor
g Air Pumps, No. — diameter — stroke — driven by —
ary Engines crank shafts, diameter 86.24 mm (50 HP) 101.2 mm (100 HP) No. 2, 1 X 50 HP, 1 X 100 HP Diesel Engines

as fitted 100 mm (50 HP) 115 mm (100 HP) Position 50 HP D.E. Port Side, 100 HP D.E. Starboard Side
the auxiliary engines been constructed under special survey yes Is a report sent herewith yes

003181-003190-0117

AIR RECEIVERS:—Have they been made under survey

State No. of report or certificate **M-3609, M**

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

Injection Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Seamless, welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

Starting Air Receivers, No.

Total cubic capacity **250 ltr x 2**

Internal diameter

400 mm

thickness

Seamless, welded or riveted longitudinal joint

Material

steel plate

Range of tensile strength

28-35 1/2"

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

(If not, state date of approval)

15-5-51

Receivers **8-6-51 Kobe**

Separate

Donkey boilers

General pumping arrangements

15-9-51

Pumping arrangements in machinery space

15

Have Torsional Vibration characteristics been approved

yes

Date of approval

15-5-51

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes

State the principal additional spare gear supplied

1 set cylinder cover complete, 1 cylinder, 1 set piston complete, gear lining with set screw, 2 sets main bearing metals & studs, 2 pinion gears for reversing 1 astern bevel gear, 1 bevel gear for governor.

Hanshin Internal Combustion

Engine Mfg. Co., Ltd.

The foregoing is a correct description

S. Kiyomashi (Technical Director)

Manufacturer.

Dates of Survey while building

During progress of work in shops

1951 - JAN. 27. FEB. 14. MAR. 3. 12. 13. 20. 23. 30 APR. 3. 9. 13. 17. 18. 20. 24. 26. 27. 28 MAY. 2. 7. 8. 9. 10. 14.

During erection on board vessel

1951 - JULY 11, 12, AUG. 2, SEP. 9, 10, 11, 12, 13, 14, 15, 16, OCT. 17, 18, 19, 20, 21, 24, 25, 26, 27.

Total No. of visits

26 (Kobe) 22 (Yokohama)

Dates of examination of principal parts—Cylinders

20-4-51

Covers **27-4-51**

pistons

28-4-51

Rods

—

Connecting rods

Crank shaft

3-4-51

Flywheel shaft

—

Thrust shaft

—

Intermediate shafts

12-7-51

Tube shaft

Screw shaft

17-5-51

Propeller

17-5-51

Stern tube

8-5-51

Engine seatings

10-9-51

Engine holding down bolts

Completion of fitting sea connections

12-7-51

Completion of pumping arrangements

10-9-51

Engines tried under working conditions

15g Air

Crank shaft, material

O.H. Steel

Identification mark

01-CK105

Flywheel shaft, material,

Identification mark

Thrust shaft, material

—

Identification mark

—

Intermediate shafts, material

O.H. Steel

Identification marks

Tube shaft, material

—

Identification mark

—

Screw shaft, material

O.H. Steel

Identification mark

Identification marks on air receivers

No. AR226

LLOYD'S TEST

WTP 48.5 Kgs

WP 30 Kgs

MS R

26-6-51

No. AR227

LLOYD'S TEST

WTP 48.5 Kgs

WP 30 Kgs

MS R

26-6-51

K.W.T. 70

LLOYD'S TEST

WTP 14 Kgs/cm²

WP 7 Kgs/cm²

MH R 10-8-51

Welded receivers, state Makers' Name

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

yes

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

yes

Description of fire extinguishing apparatus fitted

2 sets of portable foam type fire extinguisher in engine room.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

no

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.)

The machinery has been constructed

Special Survey in accordance with the Rules, Approved plans and Secretary's letter

The materials and workmanship are sound and good.

These Engines are intended for installation in Ship No. NG 30 being built East Japan Heavy Industries, Ltd., Nanao Shipbuilding Works, Japan.

It is submitted that this machinery is eligible to be classed with this

with notation of + LMC when satisfactorily installed in the vessel.

These Engines have been satisfactorily installed in the vessel and tried under working

It is submitted that the machinery of this vessel is eligible to be classed with the

with notation of + LMC 10-51, TS 10-51 Subject to the pumps on the bilge service

being fitted with selfpriming device.

The amount of Entry Fee

£139 : 4s

Special

£139 : 200.-

When applied for

19

Donkey Boiler Fee

£

When received

19

Travelling Expenses (if any)

£ 8 : 4

charged **£ 8,200.-**

Committee's Minute

TUES. 13 MAY 1952

Assigned

+ LMC 10.51 Oil Eng. Subject

(with torsional endorsement)



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