

## REPORT ON MACHINERY.

No. 16,842

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

Leith

23 FEB 1926

No. in Survey held at  
Reg. Book.

Leith

Date, First Survey 12-5-25

Last Survey 12-2-26 19

on the *Steel Screw Barge* "RUKAMAYATI"

(Number of Visits 34)

Gross 411-55

Master

Built at

Leith

By whom built *Henry Robt Co (No 35)*

Tons

Net

When built

Engines made at

Leith

By whom made

*J. Cran & Sonsville Ltd (No 246)*

Boilers made at

Glasgow

By whom made

*James Dunn & Duncan*

when made 1925

Registered Horse Power

Owners *H.H. Mahavoo of Kutch, Bhuj, India*

Port belonging to

Bombay

Nom. Horse Power as per Section 28

60

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

## ENGINES, &amp;c.—Description of Engines

Compound

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

15", 30"

Length of Stroke

20"

Revs. per minute

135

Dia. of Screw shaft

as per rule 6-6

Material of

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

no

If the liner is in more than one length are the joints burned

yes

Is the after end of the liner made water tight

yes

If the liner does not fit tightly at the part

yes

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

yes

If two

liners are fitted, is the shaft lapped or protected between the liners

yes

Dia. of Tunnel shaft

as per rule 5-75-89

Dia. of Crank shaft journals

as per rule 5-98-19

Dia. of Crank pin

6-4"

Size of Crank webs

4x12-4"

Dia. of thrust shaft under

collars

6-4"

Dia. of screw

7-6"

Pitch of Screw

8-0"

No. of Feed pumps

2

Diameter of ditto

5x3-1/2x8

Stroke

7"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

7"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

One

Sizes of Pumps

5x5x6 Duplex

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

1 @ 2", 2 @ 2" (2 Bilge pumps in E.R. @ 2")

In Holds, &amp;c.

3 @ 2"

No. of Bilge Injections

1

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room &amp; size

yes, 2 1/2"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

yes

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes

Are the Discharge Pipes above or below the deep water line

Both

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 are carried through the bunkers

Aux. steam &amp; exhaust

How are they protected

Steel casing

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

yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

worked from

yes

## BOILERS, &amp;c.—(Letter for record S)

Manufacturers of Steel *James Dunn & Duncan Ltd.*

Total Heating Surface of Boilers

1316-5

Working Pressure

130 lbs

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Tested by hydraulic pressure to

245 lbs

Date of test

21-8-25

No. of Certificate

16913

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

Bottom

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at center

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

## SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

002938-002946-0214



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

- 2 Connecting rod bolts and nuts (Top end)
- 2 Connecting rod bolts and nuts (Bottom end)
- 2 Main bearing bolts and nuts
- 1 set of coupling bolts
- 1 set of Air, feed and bilge pump valves
- 1 set of piston rings H.P. & L.P. cylinders. 1 set check valves

A quantity of assorted bolts & nuts and iron of various sizes

The foregoing is a correct description,  
HENRY ROBB, LIMITED.

*Robert Crawford* Director, Manufacturer.

Dates of Survey while building  
During progress of work in shops -- 1925 May 12.16 June 4.5.13.24.30 July 7.21 Aug. 12.22.31 Sept. 15.25 Oct. 12.21.22 Nov. 9.12  
During erection on board vessel -- Dec. 1.10.15.  
1925 Dec. 18. 21.25.30. 1926 Jan. 5.11.18.20.21.22 Feb. 2.12  
Total No. of visits 34

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 21.7.25 Slides 21.7.25 Covers 22.8.25 Pistons 22.8.25 Rods 21.7.25  
Connecting rods 21.7.25 Crank shaft 21.7.25 Thrust shaft 22.8.25 Tunnel shafts ✓ Screw shaft 12.11.25 Propeller 12.11.25  
Stern tube 12.11.25 Steam pipes tested 20.1.26 Engine and boiler seatings 10-12-25 Engines holding down bolts 11-1-26  
Completion of pumping arrangements 22-1-26 Boilers fixed 11-1-26 Engines tried under steam 22-1-26  
Completion of fitting sea connections 12-12-25 Stern tube 5-12-25 Screw shaft and propeller 12-12-25  
Main boiler safety valves adjusted 21-1-26 Thickness of adjusting washers P.V. 3/8 S.V. 3/8  
Material of Crank shaft Steel Identification Mark on Do. 1176 Material of Thrust shaft Steel Identification Mark on Do. 1230  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 1231  
Material of Steam Pipes Solid drawn copper ✓ Test pressure 260 lbs. ✓

Is an installation fitted for burning oil fuel

no

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

Have the requirements of Section 49 of the Rules been complied with

no

If so, state name of vessel

Is this machinery duplicate of a previous case

no

General Remarks (State quality of workmanship, opinions as to class, &c.) The Machinery of this vessel has been built under Special Survey in accordance with the Rules; the materials and workmanship are sound & good. The engines, boiler & auxiliaries were examined under working conditions, safety valves adjusted to 130 lb per sq inch and all found satisfactory. The machinery is now in a good and safe working condition and renders the vessel eligible in our opinion to have the notation of +LMC 2.26 in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 2.26.06.

*W.D.*  
03/2/26

The amount of Entry Fee £ 2 : 0 :  
Special £ 9 : 0 :  
Donkey Boiler Fee £ ✓ : 1 :  
Travelling Expenses (if any) £ ✓ : 1 :  
When applied for. 22-2-1926  
When received. 11/3/1926

A. T. Thomas & Co. Marine  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. 26 FEB 1926

+ LMC 2.26  
06.



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Foundation