

REPORT ON BOILERS

No. 1436

20 MAY 1949

Received at London Office

Date of writing Report 7.4.49 When handed in at Local Office 19. Port of Karachi

No. in Reg. Book Survey held at East Wharf Date, First Survey 8.1.49 Last Survey 4.4.1949

(Number of Visits 4) Gross 444.76 Tons Net 186.13

on the Steel screw steamer FRAVART (ex H.M. Trawler)

Master Built at Bombay By whom built Alcock Ashdown & Co Yard No. N.C.P. 8 When built 1942

Engines made at No Record By whom made Engine No. When made

Boilers made at No Record By whom made Boiler No. When made

Nominal Horse Power 155 Owners East West Steamship Co. Port belonging to Karachi

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel No record (Letter for Record)

Total Heating Surface of Boilers 2606 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers one Marine Multitubular Working Pressure 200 lb/sq in

Tested by hydraulic pressure to 350 lb/sq in Date of test 18.3.49 No. of Certificate Can each boiler be worked separately

Area of Firegrate in each Boiler 63.36 sq ft No. and Description of safety valves to each boiler Two 3 1/4" Diam spring loaded

Area of each set of valves per boiler per Rule 15.2 sq ft as fitted 16.59 sq ft Pressure to which they are adjusted 200 lb/sq in Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork 2' 6" to Bunkers Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Single bottom vessel Is the bottom of the boiler insulated No

Largest internal dia. of boilers 177 9/8" Length Shell plates: Material Steel Tensile strength 29.6.33 tons

Thickness 1 3/16" Are the shell plates welded or flanged End plates flanged Description of riveting: circ. seams end Double inter 9 1/4" Pitch of rivets 4"

long. seams Treble Diameter of rivet holes in circ. seams 1 3/8" long. seams 1 3/8"

Percentage of strength of circ. end seams plate 65.6% rivets 53.6% Percentage of strength of circ. intermediate seam plate 85.53% rivets 88.54%

Percentage of strength of longitudinal joint plate 88.54% rivets 88.54% combined 88.54% Working pressure of shell by Rules 203 lb/sq in

Thickness of butt straps outer 1" inner 1 1/8"

No. and Description of Furnaces in each Boiler 3 Deighton Type

Material Steel Tensile strength No record Smallest outside diameter 42 7/16"

Length of plain part top 12 13/32" bottom 12 23/32" Thickness of plates crown 19 3/8" bottom 19 3/8"

Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 203 lb/sq in

End plates in steam space: Material Steel Tensile strength 29.6.33 tons Thickness 1 1/2" Pitch of stays 20 1/2"

How are stays secured Double Nut Working pressure by Rules 225 lb/sq in

Tube plates: Material front Steel back Steel Tensile strength 29.6.33 tons Thickness 25 3/8"

Mean pitch of stay tubes in nests 7 3/4" Pitch across wide water spaces 13 7/8" Working pressure front 22.6 lb/sq in back 22.6 lb/sq in

Girders to combustion chamber tops: Material Steel Tensile strength 28.6.32 tons Depth and thickness of girder at centre 8 1/4" x 15 1/8" Length as per Rule 7' 31" Distance apart 10 3/4" No. and pitch of stays in each 2 at 9 7/8"

Working pressure by Rules 213 lb/sq in Combustion chamber plates: Material Steel Tensile strength 26.6.30 tons Thickness: Sides 25 3/8" Back 3 1/4" Top 25 3/8" Bottom 32"

Pitch of stays to ditto: Sides 9 7/8" Back 9 1/2" Top 9 7/8" Are stays fitted with nuts or riveted over Nuts fitted

Working pressure by Rules 207 lb/sq in Front plate at bottom: Material Steel Tensile strength 29.6.33 tons Thickness 7/8"

Lower back plate: Material Steel Tensile strength 29.6.33 tons Thickness 7/8"

Pitch of stays at wide water space 14" x 9 7/8" Are stays fitted with nuts or riveted over Nuts fitted

Working pressure 207 lb/sq in Main stays: Material Steel Tensile strength 28.6.32 tons Diameter At body of stay 3 1/8" No. of threads per inch 6 Area supported by each stay 410 sq in

Over threads 3 1/2"

Working pressure by Rules 208 lb/sq in Screw stays: Material Steel Tensile strength 26.6.30 tons Diameter At turned off part 1 7/8" No. of threads per inch 9 Area supported by each stay 93.8 sq in

Over threads 1 7/8"

Working pressure by Rules. 213 lb/sq in Are the stays drilled at the outer ends. no ✓ Margin stays: Diameter { At turned off part, 2" or Over threads. 2" ✓
No. of threads per inch. 9 ✓ Area supported by each stay. 106 sq in Working pressure by Rules. 275 lb/sq in ✓
Tubes: Material. Seamless steel External diameter { Plain. 2 3/4" ✓ Stay. 2 3/4" ✓ Thickness. 5/16" ✓ No. of threads per inch. 9 ✓
Pitch of tubes. 3 7/8" ✓ Working pressure by Rules. 275 lb/sq in Manhole compensation: Size of opening in shell plate. 13 1/2" x 14 1/2" Section of compensating ring. 1 15/16" No. of rivets and diameter of rivet holes. 32 x 1 15/32" ✓
Outer row rivet pitch at ends. 10 1/8" Depth of flange if manhole flanged. 3 1/8" ✓ Steam Dome: Material. ✓
Tensile strength. ✓ Thickness of shell. ✓ Description of longitudinal joint. ✓
Diameter of rivet holes. ✓ Pitch of rivets. ✓ Percentage of strength of joint { Plate. ✓ Rivets. ✓
Internal diameter. ✓ Working pressure by Rules. ✓ Thickness of crown. ✓ No. and diameter of stays. ✓ Inner radius of crown. ✓ Working pressure by Rules. ✓
How connected to shell. ✓ Size of doubling plate under dome. ✓ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell. ✓

Type of Superheater. None Manufacturers of { Tubes. ✓ Steel forgings. ✓ Steel castings. ✓
Number of elements. ✓ Material of tubes. ✓ Internal diameter and thickness of tubes. ✓
Material of headers. ✓ Tensile strength. ✓ Thickness. ✓ Can the superheater be shut off and the boiler be worked separately. ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler. ✓
Area of each safety valve. ✓ Are the safety valves fitted with easing gear. ✓ Working pressure as per Rules. ✓ Pressure to which the safety valves are adjusted. ✓ Hydraulic test pressure: tubes. ✓ forgings and castings. ✓ and after assembly in place. ✓ Are drain cocks or valves fitted to free the superheater from water where necessary. ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with. yes ✓

The foregoing is a correct description,
Manufacturer. ✓

Dates of Survey while building { During progress of work in shops - -) Are the approved plans of boiler and superheater forwarded herewith. (If not state date of approval.)
During erection on board vessel - -) Total No. of visits. ✓

Is this Boiler a duplicate of a previous case. yes ✓ If so, state Vessel's name and Report No. FARISHTA: N° Kmh 1398

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel is known to have been supplied by the Admiralty to the Directorate of Shipbuilding & Repairs during 1941 - 42, although there are now no makers marks on the engine or boilers.

The workmanship is good & the machinery if eligible, in my opinion to be classed as contemplated.

Survey Fee £ 10-87-0 } When applied for, ... 19...
Travelling Expenses (if any) £ : 10-0 } When received, ... 19...

John
Engineer Surveyor to Lloyd's Register of Shipping.

A
Committee's Minute

FRI. 17 JUN 1949

Assigned