

REPORT ON BOILERS.

No. 51665.

Received at London Office

10 JUL 1942

Date of writing Report 23-4-1942 When handed in at Local Office 8 JUL 1942 10 Port of HULL.

No. in Survey held at HULL.

Date, First Survey 5.12.41

Last Survey 2.6.1942

(Number of Visits)

Gross 244.
Net Nil.

on the Steam Tug. [EMPIRE GOBLIN.

Built at SELBY.

By whom built Cochrane & Co. Ltd

Yard No. 1244. When built 1942

Engines made at HULL.

By whom made Angus & Smith Ltd

Engine No. 706 When made 4

Boilers made at HULL.

By whom made Angus & Smith Ltd

Boiler No. 705 When made 4

Nominal Horse Power 132.

Owners Ministry of War Transport.

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appley Frodingham Steel Co. Ltd & Colville.

(Letter for Record)

Total Heating Surface of Boilers 2390.

Is forced draught fitted No

Coal or Oil fired Coal.

No. and Description of Boilers One S. B.

Working Pressure 200 lb./sq. in.

Tested by hydraulic pressure to 350 lb./sq. in. Date of test 23/3/42 No. of Certificate 4137.

Can each boiler be worked separately

Area of Firegrate in each Boiler 63-2

No. and Description of safety valves to each boiler 2 - Spring loaded

Area of each set of valves per boiler

per Rule 13-90

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 None

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6".

Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating None.

Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 15'-6 1/4" Length 11'-6".

Shell plates: Material Steel

Tensile strength 29-33 tons/sq. in.

Thickness 1 3/8".

Are the shell plates welded or flanged No.

Description of riveting: circ. seams end D.R. Lap.

Long. seams T.R., D.B.S.

Diameter of rivet holes in circ. seams 1 3/32"

Pitch of rivets 4 3/16"

Percentage of strength of circ. end seams plate 66.4%.

rivets 42.7%.

Percentage of strength of circ. intermediate seam plate -

rivets 85.7%.

Percentage of strength of longitudinal joint plate 85.7%.

rivets 85.0%.

combined 90.15%.

Thickness of butt straps outer 1 1/16"

inner 1 3/16"

No. and Description of Furnaces in each Boiler 3. Cf. Deighton Section.

Material Steel

Tensile strength 26-30 tons/sq. in.

Smallest outside diameter 3'-11 3/8".

Length of plain part top

Thickness of plates crown 1 1/16"

Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom None

End plates in steam space: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness 1 3/16".

Pitch of stays 18 3/4" x 18 1/2".

How are stays secured Nuts. Inside & Out.

Tube plates: Material

front Steel

back Steel

Tensile strength 26-30 tons/sq. in.

Thickness 1 5/16"

7/8".

Mean pitch of stay tubes in nests 9 1/2" x 9 1/2".

Pitch across wide water spaces 14 1/4" x 9 1/2".

Girders to combustion chamber tops: Material Steel

Tensile strength 29-33 tons/sq. in.

Depth and thickness of girder

at centre 9 1/2".

Length as per Rule 2'-11".

Distance apart 9".

No. and pitch of stays

in each 3 @ 8 3/4".

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness: Sides 3/4".

Back 2 3/32"

Top 2 3/32"

Bottom 3/4".

Pitch of stays to ditto: Sides 9 1/2" x 8 3/4".

Back 9 1/2" x 8 1/2"

Top 9" x 8 3/4"

Are stays fitted with nuts or riveted over Nuts.

Front plate at bottom: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness 1 5/16"

Lower back plate: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness 7/8"

Pitch of stays at wide water space 14 1/4" x 8 1/2".

Are stays fitted with nuts or riveted over Nuts.

Main stays: Material Steel

Tensile strength 28-32 tons/sq. in.

Diameter

At body of stay, 3 1/4"

Over threads -

No. of threads per inch 6.

Crew stays: Material Steel

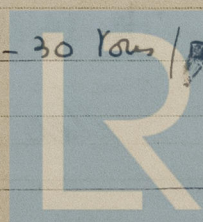
Tensile strength 26-30 tons/sq. in.

Diameter

At turned off part, 1 3/4"

Over threads -

No. of threads per inch 9.



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Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 7/8" or 2" Over threads 1 7/8" and 2" ✓
No. of threads per inch 9 ✓
Tubes: Material IRON ✓ External diameter { Plain 3 1/2" Stay 3 1/2" ✓ Thickness { 8 W.G. 5/16" ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 3/4" ✓ Manhole compensation: Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 1 3/8" x 15" ✓ No. of rivets and diameter of rivet holes 28 @ 1 1/32" ✓
Outer row rivet pitch at ends 9 7/8" ✓ Depth of flange if manhole flanged 3 3/8" ✓ Steam Dome: Material NONE ✓
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 _____ Thickness of crown _____ No. and diameter of stays _____
How connected to shell _____ Inner radius of crown _____
of rivets in outer row in dome connection to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch _____

Type of Superheater _____ 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 _____
Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____
tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks on 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 ✓

For AMOS & SMITH LTD.

The foregoing is a correct description,

A. S. Newby Manufacturer
DIRECTOR

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

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. _____

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

This Boiler has been constructed under Special Survey in accordance with the Rule and the approved plans.
The Workmanship & Material are good and when subjected to a hydraulic test of 350 lb / sq in it was found satisfactory in every respect.

Survey Fee ... £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

J. H. ...
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 AUG 1942

Assigned

See Hul. No. 51665



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