

REPORT ON BOILERS.

No. 51887.

Received at London Office 5 FEB 1943

Date of writing Report 31-12-1942. When handed in at Local Office 4 FEB 1943 10 Port of HULL.

No. in Survey held at HULL.
Reg. Books

Date, First Survey 6. 6. 42.

Last Survey 20. 1. 43.

(Number of Visits 40.)

Gross 274
Net 210

on the STEAM TUG. [EMPIRE DENIS.

Built at SELBY.

By whom built Colvane & Sons Ltd

Yard No. 1256. When built 1943

Engines made at HULL.

By whom made Angus & Smith Ltd

Engine No. 715. When made

Boilers made at HULL.

By whom made Angus & Smith Ltd

Boiler No. 715. When made

Nominal Horse Power 132.

Owners The Ministry of War Transport

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham Steel Co. Ltd. and Colville Ltd.

(Letter for Record 5)

Total Heating Surface of Boilers 2390 sq. ft.

Is forced draught fitted No.

Coal or Oil fired Oil.

No. and Description of Boilers One S.B.

Working Pressure 200 lb./sq. in.

Tested by hydraulic pressure to 340 lb./sq. in. Date of test 10-12-42 No. of Certificate 4173. Can each boiler be worked separately —

Area of Firegrate in each Boiler — (6.5) No. and Description of safety valves to each boiler 2 Spring loaded

Area of each set of valves per boiler {per Rule 13.9 sq. in. as fitted 14.137 sq. in. 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 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 1/2". 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. inter.

long. seams T.R. - D.B.S. Diameter of rivet holes in {circ. seams 1 1/32" long. seams 1 1/32" Pitch of rivets {4 3/16" 9 7/8"

Percentage of strength of circ. end seams {plate 66.4% rivets 42.7%

Percentage of strength of circ. intermediate seam {plate 85.7% rivets 85.0%

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. C.F. Deighton Section.

Material Steel Tensile strength 26-30 tons/sq. in.

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

Length of plain part {top 3 1/16" bottom 3 1/16"

Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.f. bottom —

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 and out.

Tube plates: Material {front Steel back Steel Tensile strength {26-30 tons/sq. in. 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, or Over threads 3 1/4"

No. of threads per inch 6.

Screw stays: Material Steel

Tensile strength 26-30 tons/sq. in.

Diameter {At turned off part, or Over threads 1 3/4"

No. of threads per inch 9.

