

## REPORT ON BOILERS.

No. 3469 b

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No. in Reg. Book. 1 Survey held at Trondhjem and Langesund Date, First Survey 12/7/29 Last Survey 12th June 1930

on the steel single screw steam vessel "TORRIDAL" (Number of Visits 17) Gross Tons 1381 Net Tons 780

Master Christensen Built at Langesund By whom built Langesunds Mek. Verkskeds and No. 9 When built 1930

Engines made at Trondhjem By whom made Trondhjem's Mek. Verkskeds Engine No. 274 When made 1930

Boilers made at Trondhjem By whom made — Boiler No. 535-536 When made 1930

Nominal Horse Power (122) Owners Ingv. Björneboes Rederi A/S Port belonging to Kristiansund

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Stewarts & Lloyds, Appleby Iron Co., Scottish Iron & Steel Co., William Beadmore & Co., David Colville & Sons, Tredingham Iron & Steel Co., Lindholm, Kotala, Raufoss Aun. (Letter for Record E. 18/4/29 28/10/29)

Total Heating Surface of Boilers 2097.2 ft<sup>2</sup> Is forced draught fitted Yes Coal or Oil fired coal

No. and Description of Boilers 2 cylindrical, multitubular 2SR Working Pressure 205 lb./in.<sup>2</sup>

Tested by hydraulic pressure to 357.5 lb./in.<sup>2</sup> Date of test 14/12/29 No. of Certificate 95-96 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 25 ft<sup>2</sup> No. and Description of safety valves to each boiler Two, precisional

Area of each set of valves per boiler per Rule 3.59 3.94 for High Lift Pressure to which they are adjusted 205 lb./in.<sup>2</sup> 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 9" Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating open bottom in boiler space the bottom of the boiler insulated Yes

Largest internal dia. of boilers 10'-3" Length 11'-0" Shell plates: Material S.M. steel Tensile strength 28-35 tons/in.<sup>2</sup>

Thickness 31/32" Are the shell plates welded or flanged flanged Description of riveting: circ. seams double

long. seams treble Diameter of rivet holes in circ. seams 1 1/4" Pitch of rivets 3 1/2"

Percentage of strength of circ. end seams plate 44.7% rivets ✓ Percentage of strength of circ. intermediate seam plate 85.7% rivets ✓

Percentage of strength of longitudinal joint plate 85.7% rivets 94.8% combined 90.3% Working pressure of shell by Rules 205.7 lb./in.<sup>2</sup>

Thickness of butt straps outer 3/4" inner 7/8" No. and Description of Furnaces in each Boiler 2 Morrison's corrugated

Material S.M. steel Tensile strength 26-30 tons Smallest outside diameter 36"

Length of plain part top 33/64" bottom 33/64" Thickness of plates top 33/64" bottom 33/64" Description of longitudinal joint ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 206.6

End plates in steam space: Material S.M. steel Tensile strength 28-35 tons Thickness 15/16" & 7/8" Pitch of stays 15" x 12 3/4"

How are stays secured Double nuts Working pressure by Rules 205.7 218.4 lb./in.<sup>2</sup>

Tube plates: Material front S.M. steel back — Tensile strength 28-35 tons Thickness 15/16" 7/8"

Mean pitch of stay tubes in nests 8 1/2" x 8" Pitch across wide water spaces 14" Working pressure front 205.6 lb./in.<sup>2</sup> back 205.6 lb./in.<sup>2</sup>

Girders to combustion chamber tops: Material S.M. steel Tensile strength 28-35 tons/in.<sup>2</sup> Depth and thickness of girder at centre 7/8" x 7/8" x 2 Length as per Rule 2'-7" - (12" x 3/4") Distance apart 7 1/2" No. and pitch of stays in each 229" Working pressure by Rules 205.7

Tensile strength 26-30 tons Thickness: Sides 215/32 Back 3/4" Top 215/32 Bottom 7/8"

Pitch of stays to ditto: Sides 9" x 8 1/8" Back 10" x 9 1/2" Top 7 1/2" x 9" Are stays fitted with nuts or riveted over Both

Working pressure by Rules Back 208.5, sides 211.4 Front plate at bottom: Material S.M. steel Tensile strength 26-30 tons/in.<sup>2</sup>

Thickness 15/16" Lower back plate: Material S.M. steel Tensile strength 26-30 tons Thickness 7/8"

Pitch of stays at wide water space 9.5" x 14.5" Are stays fitted with nuts or riveted over nuts

Working Pressure 208.6 lb./in.<sup>2</sup> Main stays: Material S.M. steel Tensile strength 28-35 tons

Diameter At body of stay, 2 3/8" or Over threads No. of threads per inch 6 Area supported by each stay 15" x 12 3/4"

Working pressure by Rules 205.9 Screw stays: Material S.M. steel Tensile strength 26-30 tons

Diameter At turned off part, 1 5/8", 1 7/8" & 2" or Over threads No. of threads per inch 9 Area supported by each stay 10" x 9 1/2" = 95 in.<sup>2</sup>



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