

REPORT ON BOILERS.

5 FEB 1946

Received at London Office 7 FEB 1946

Date of writing Report 19 5 FEB 1946 When handed in at Local Office 19 5 FEB 1946 Port of Hull

No. in Reg. Book Surrey held at Hull Date, First Survey 26. 7. 45 Last Survey 4. 1. 1946

on the Steam Trawler "NAYENA" (Number of Visits 23) Tons { Gross 361 Net 139

Built at Beverley By whom built Cook, Welton & Gemmell, Ltd. Yard No. 757 When built 1946

Engines made at Hull By whom made Chas. D. Holmes & Co. Ltd. Engine No. 1415 When made 1946

Boilers made at Hull By whom made Chas. D. Holmes & Co. Ltd. Boiler No. 1415 When made 1946

Nominal Horse Power _____ Owners J. Mar Sons Ltd. Port belonging to Hutwood

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appley Frodingham Steel Co. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 1410 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One single end multitubular cylindrical boiler Working Pressure 210 lbs.

Tested by hydraulic pressure to 365 lb. Date of test 19. 11. 45 No. of Certificate 4254 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 52 sq ft No. and Description of safety valves to each boiler One 2 1/2" D.S. ordinary

Area of each set of valves per boiler { per Rule 9.5 as fitted 9.8 Pressure to which they are adjusted 216 lbs. 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 16" Is oil fuel carried in the double bottom under boilers none

Smallest distance between shell of boiler and tank top plating none Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14'-3 1/2" Length 10'-8" Shell plates: Material Steel Tensile strength 31/35

Thickness 1 1/4" Are the shell plates welded or flanged no. Description of riveting: circ. seams { end DR LAP inter. ✓

long. seams T.R. D.S.S. Diameter of rivet holes in { circ. seams 1 5/16" long. seams 1 1/32" Pitch of rivets { 3 3/4" 9 1/8"

Percentage of strength of circ. end seams { plate 65.3 rivets 45.2 Percentage of strength of circ. intermediate seam { plate 85.1 rivets 85.8 combined 87.66

Percentage of strength of longitudinal joint { plate 85.1 rivets 85.8 combined 87.66

Thickness of butt straps { outer 3 1/32" inner 1 3/32" No. and Description of Furnaces in each Boiler Three Deighton Corrugation

Material Steel Tensile strength 26/30 Smallest outside diameter 3' - 5 3/4"

Length of plain part { top 5/8" bottom 5/8" Thickness of plates { crown 5/8" bottom 5/8" Description of longitudinal joint Welded

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

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 3/16" Pitch of stays 1'-7" x 1-6 1/2"

How are stays secured Double nuts and washers

Tube plates: Material { front Steel back " Tensile strength { 26/30 Thickness { 1 5/16" 7/8"

Mean pitch of stay tubes in nests 9 3/4" x 9 3/4" Pitch across wide water spaces 14"

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 Depth and thickness of girder at centre 10" Two 1/8" Length as per Rule 2'-8 29/32" Distance apart 10 1/2" No. and pitch of stays in each Three 8"

Combustion chamber plates: Material Steel Tensile strength 26/30 Thickness: Sides 2 3/32" Back 2 3/32" Top 2 3/32" Bottom 2 5/32"

Pitch of stays to ditto: Sides 9 3/4" x 8 1/2" Back 9 1/8" x 8 3/4" Top 10 1/2" x 8" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 1/2"

Pitch of stays at wide water space 14" x 9 5/8" Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel Tensile strength 28/32

Diameter { At body of stay 3/8" Over threads " No. of threads per inch 8

Screw stays: Material Steel Tensile strength 26/30

Diameter { At turned off part 1 3/4" Over threads " No. of threads per inch 10



NAVENA

Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 2" & 2 1/8" Over threads

No. of threads per inch 10

Tubes: Material Seamless steel External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 8 WG 7/16, 3/8, 5/16 No. of threads per inch 9

Pitch of tubes 4 7/8" x 4 7/8" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 2'-11 5/8" x 1 1/4" No. of rivets and diameter of rivet holes 61 - 1 1/32"

Outer row rivet pitch at ends 10 5/16" Depth of flange if manhole flanged Bot 3 3/8", Top 3 1/4" Steam Dome: Material Steel

Tensile strength 26/30 Thickness of shell 3/4" Description of longitudinal joint S.R.

Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54% Rivets 42.8%

Internal diameter 2'-9" Thickness of crown 1/8" No. and diameter of stays 2-2 1/4" Inner radius of crown FLAT.

How connected to shell 2A Size of doubling plate under dome 4'-9 1/2" dia x 1/4" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/32" 3 3/4" pitch

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

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.

FOR CHARLES D. HOLMES & CO., LTD.

W.R. Evans Manufacturer.

Manager

Dates of Survey { During progress of work in shops -- 1945 JULY 26 to DEC 6 Are the approved plans of boiler and superheater forwarded herewith 24-4-45. (If not state date of approval.) while building { During erection on board vessel --- See report Total No. of visits 23

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

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

This boiler has been built and installed under special survey in accordance with the Society's Rules & Regulations and the Secretary's letters. The workmanship and materials are good. Boiler tested by 365 lb hydraulic pressure, examined under steam, safety valves adjusted as overleaf, accumulation test held and boiler found satisfactory on completion of all tests.

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

W.S. Shields
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 15 FEB 1946

Committee's Minute
Assigned See F.E. Machy rpt.

