

REPORT ON BOILERS.

No. 44282.

21 OCT 1936

20 OCT 1936

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of HULL

No. in Survey held at Hull Date, First Survey 19th June 1936 Last Survey 14th October 1936

67416 on the Steam trawler "Cape Palliser" (Number of Visits) Tons { Gross 494.72 Net 190.28

Master Selly Built at Selly By whom built Bochran & Sons Ltd Yard No. 1169 When built 1936, 10

Engines made at Hull By whom made Charles D. Holmes & Co. Ltd. Engine No. 1497 When made 1936

Boilers made at Hull By whom made Charles D. Holmes & Co. Ltd. Boiler No. 1497 When made 1936

Nominal Horse Power 132 Owners Hudson Steam Fishing Co. Ltd. Port belonging to Hull.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland Ltd. (Letter for Record "S")

Total Heating Surface of Boilers 2415 sq. ft. Is forced draught fitted No. Coal or Oil fired Coal

No. and Description of Boilers One Single-ended Working Pressure 220 lbs.

Tested by hydraulic pressure to 380 lbs. Date of test 17/9/36 No. of Certificate 3952 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 64 sq. ft. No. and Description of safety valves to each boiler Two 3" dia spring loaded

Area of each set of valves per boiler { per hole 12.8 sq. ins as fitted 14.1 sq. ins Pressure to which they are adjusted 220 lbs. Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 11" Is oil fuel carried in the double bottom under boilers No

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

Largest internal dia. of boilers 15'-6" Length 11'-0" Shell plates: Material Steel Tensile strength 31/35 Tons

Thickness 1 1/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R. inter. 3 3/4"

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

Percentage of strength of circ. end seams { plate 62.6 rivets 43.9 Percentage of strength of circ. intermediate seam { plate 84.63 rivets 87.5

Percentage of strength of longitudinal joint { plate 86.8 rivets 87.5 combined 86.8 Working pressure of shell by Rules 220 lbs.

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

Material Steel Tensile strength 26/30 Tons Smallest outside diameter 3'-9 1/8"

Length of plain part { top 1 1/16" bottom 1 1/16" Thickness of plates { crown 1 1/16" bottom 1 1/16" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 223 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 1 7/32" Pitch of stays 18 1/4" x 18 3/4"

How are stays secured Double Nuts & washers Working pressure by Rules 230 lbs.

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 Tons Thickness { 15/16" 29/32"

Mean pitch of stay tubes in nests 11.5" Pitch across wide water spaces 14 1/4" Working pressure { front 220 lbs. back 225 lbs.

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 Tons Depth and thickness of girder at centre 9 1/2" x 2 @ 7/8" Length as per Rule 2'-9 1/32" Distance apart 9 1/4" (diag) 8" (centre) No. and pitch of stays in each 3 @ 7 3/4" Working pressure by Rules 248 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30 Tons Thickness: Sides 23/32" Back 23/32" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 9 1/2" x 8 1/4" Back 9 3/4" x 8 1/4" Top 7 3/4" x 9 1/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 226 lbs. Front plate at bottom: Material Steel Tensile strength 26/30 Tons

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26/30 Tons Thickness 29/32"

Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure 248 lbs. Main stays: Material Steel Tensile strength 28/32 Tons

Diameter { At body of stay, or 3 1/4" Over threads 3 1/4" No. of threads per inch 8 Area supported by each stay 342 sq. ins

Working pressure by Rules 236 lbs. Screw stays: Material Steel Tensile strength 26/30 Tons

Diameter { At turned off part, or 1 3/4" Over threads 1 3/4" No. of threads per inch 10 Area supported by each stay 80.5 sq. ins (Back)

Working pressure by Rules 226 lb. Are the stays drilled at the outer ends No. Margin stays: Diameter ^{At turned off part.} 1 7/8" x 2"
 No. of threads per inch 10 Area supported by each stay 99 sq. ins. Working pressure by Rules 251 lb.
 Tubes: Material Iron External diameter ^{Plain} 3 1/2" Thickness ^{Stay} 7/16" No. of threads per inch 9
 Pitch of tubes 4 3/4" x 4 7/8" Working pressure by Rules 260 lb. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 4" dia x 1 1/2" No. of rivets and diameter of rivet holes 860 - 1 5/32"
 Outer row rivet pitch at ends 10 3/4" Depth of flange if manhole flanged 3/4" Steam Dome: Material Steel
 Tensile strength 26/30 tons Thickness of shell 3/4" Description of longitudinal joint S. R. Lap.
 Diameter of rivet holes 1 5/32" Pitch of rivets 2 1/4" Percentage of strength of joint ^{Plate} 54.4
 Internal diameter 2'-9" Working pressure by Rules 231 lb. Thickness of crown 7/8" No. and diameter of stays 2 @ 2 3/8" dia Inner radius of crown None Working pressure by Rules Ample
 How connected to shell D. R. Lap. Size of doubling plate under dome 4' 1/4" dia x 1 5/32" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 5/32" x 10 3/4"

Type of Superheater Smoke tube Manufacturers of ^{Tubes} Please see M/c certificates F-782-3.
 Number of elements 41 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 1/2" x 3 mm.
 Material of headers Steel forgings Tensile strength 26-30 tons Thickness 5/8" Can the superheater be shut off and the boiler be worked separately Yes. Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes.
 Area of each safety valve 1.46 sq. in. Are the safety valves fitted with easing gear Yes. Working pressure as per Rules Approved for 220 lb. Pressure to which the safety valves are adjusted 222 lb. Hydraulic test pressure: tubes 1000 lb. forgings and castings 660 lb. and after assembly in place 660 lb. Are drain cocks or valves fitted to free the superheater from water where necessary Yes.
 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. Manufacturer.

Dates of Survey ^{During progress of work in shops - -} Please see memo. Are the approved plans of boiler and superheater forwarded herewith No.
 while building ^{During erection on board vessel - -} Please see memo. Total No. of visits 1

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey and in accordance with the approved plan. It has been satisfactorily fitted on board, examined under steam and safety valves adjusted.

The approved plan is retained for guidance in dealing with repeat boilers Nos 1506, 9, 10.

Charged on engine report sent herewith

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

C. Knoffat
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 23 OCT 1936
 Assigned See Hul F.E. 47282

