

# REPORT ON BOILERS.

Std. No. 33807

No. 11577

4 AUG 1943

Received at London Office

Date of writing Report 3. 8. 19 43. When handed in at Local Office 3. 8. 19 43. Port of

No. in Survey held at MANCHESTER. Date, First Survey 3.5.43 Last Survey 17. 6. 19 43.

on the CHINESE PRINCE (Number of Visits 9) Gross 9485 Tons Net 5752

built at SUNDERLAND. By whom built J. L. Thompson. Yard No. 625. When built 1943.

Engines made at By whom made Wm. Duffield & Sons, Ltd. Engine No. 232 When made 1943

Boilers made at HYDE. By whom made J. Adamson & Co. Boiler No. 2591. When made 1943.

owners Prime Line Line Port belonging to London

## VERTICAL DONKEY BOILER.

made at Hyde. By whom made J. Adamson & Co. Ltd. Boiler No. 2591. When made 1943. Where fixed -

Manufacturers of Steel Colvilles Ltd.

Total Heating Surface of Boiler Is forced draught fitted No. Coal or Oil fired Exhaust Gas.

No. and Description of Boilers Two Clarkson Boilers Type BEGAT/650. Working pressure 120 lbs/sq. in.

Tested by hydraulic pressure to 230 lbs/sq. in. Date of test 1.6.43. 17.6.43. No. of Certificate 111.

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler Not fitted by Joseph Adamson & Co.

Area of each set of valves per boiler per rule - as fitted - 6.287 Pressure to which they are adjusted 120 lbs. Are they fitted with easing gear Yes L.R.H.

State whether steam from main boilers can enter the donkey boiler - Smallest distance between boiler or uptake and bunkers

woodwork - Is oil fuel carried in the double bottom under boiler - Smallest distance between base of boiler and tank top plating

- Is the base of the boiler insulated - Largest internal dia. of boiler 7'5 3/4" Height 14'6".

Shell plates: Material O. H. Steel. Tensile strength 29/33 tons. Thickness 3/8"

Are the shell plates welded or flanged No. Description of riveting: circ. seams end S.R. Lap Joint. long seams D.R. Double butt Strap.

Dia. of rivet holes in circ. seams 25/32" Pitch of rivets 1 7/8" 2.11/16" Percentage of strength of circ. seams plate 58.4 rivets 40.6 of Longitudinal joint plate 76.0 rivets 87.6 combined -

Working pressure of shell by rules 125 lbs/sq. in. Thickness of butt straps outer 3/8" inner 3/8"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial spherical Material O. H. Steel.

Tensile strength 26/30 tons/sq. Thickness 15/16" Radius 6'6" Working pressure by rules 145 lbs/sq. in.

Description of Furnace: Plain, spherical, or dished crown - Material - Tensile strength -

Thickness - External diameter top - bottom - Length as per rule - Working pressure by rules -

Pitch of support stays circumferentially - and vertically - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Radius of spherical or dished furnace crown 6'6" Working pressure by rule

Thickness of Ogee Ring 1 1/8" Diameter as per rule D 89.75" a 55.875" Working pressure by rule 123 lbs/sq. in.

Combustion Chamber: Material O. H. Steel. Tensile strength 26/30 tons/sq. Thickness of top plate 11/16"

Radius if dished 4'0" Working pressure by rule 120 lbs/sq. Thickness of tube plate 1 1/8" Diameter if circular 4'5 1/2"

Length as per rule 8'1 3/4" Pitch of stays - Are stays fitted with nuts or riveted over -

Diameter of stays over thread - Working pressure of tube plate by rules As approved.

Tube Plates: Material front - back - Tensile strength - Thickness - Mean pitch of stay tubes in nests -

If comprising shell, Dia. as per rule front - back - Pitch in outer vertical rows - Dia. of tube holes FRONT stay - plain - BACK stay - plain -

Is each alternate tube in outer vertical rows a stay tube - Working pressure by rules front - back -

Girders to combustion chamber tops: Material - Tensile strength -

Depth and thickness of girder at centre - Length as per rule -

Distance apart - No. and pitch of stays in each - Working pressure by rule -



Crown stays: Material - Tensile strength - Diameter { at body of stay, or over threads. No. of threads per inch - Area supported by each stay - Working pressure by rules

Screw stays: Material - Tensile strength - Diameter { at turned off part, or over threads. No. of threads per inch - Area supported by each stay - Working pressure by rules Are the stays drilled at the outer ends 9

Tubes: Material O.H. Steel Thimble Tubes. External diameter 4" Thickness 8 L.S.G. No. of threads per inch - Pitch of tubes 6.98" Working pressure by rules

Mudhole Compensation: Size of opening in shell plate 6" x 4" Section of compensating ring 11 1/4" x 9 1/4" x 3/4" No. of rivets and diameter of rivet holes 8 - 25/32" dia. Outer row rivet pitch at ends 3" Depth of flange if manhole flanged 3 3/8"

Uptake: External diameter 1' 10.13/16" Thickness of uptake plate 1/2"

Cross Tubes: No. External diameters Thickness of plates

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

The foregoing is a correct description,  
For JOSEPH ADAMSON & CO. LTD.  
Joseph Adamson Manufacturer

3.5.43, 16.5.43, 14.5.43, 27.5.43, 1.6.43, 5.6.43, 9.6.43, 16.6.43, 17.6.43.  
Dates of Survey { During progress of work in shops - - During erection on board vessel - -  
while building  
Is the approved plan of boiler forwarded herewith 21.7.42. 14.8.42.  
(If not state date of approval.)  
Total No. of visits 9.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) THIS BOILER HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIAL AND WORKMANSHIP ARE OF GOOD QUALITY AND THE BOILER WHEN TESTED IN THE SHOP UNDER HYDRAULIC PRESSURE OF 230 LBS/SQ. INCH WAS FOUND SOUND AND TIGHT. THIS BOILER IS, IN MY OPINION, ELIGIBLE TO BE FITTED ON BOARD A VESSEL CLASSED WITH THIS SOCIETY. THE BOILER SHELL PLATE AT THE FRONT ABOVE MUD HOLE DOORS HAS BEEN STAMPED:-

BOILER NO. 2591.  
No. 111.  
LLOYD'S TEST.  
230 lbs.  
W.P. 120 lbs.  
A.G.S. 1.6.43.

This boiler has been efficiently fitted on board and arranged to be heated only by the exhaust gas of the starboard main engines. The safety valves have been adjusted to the working pressure by steam generated in the other dummy boiler.

L. R. Horne

Survey Fee ... £ 4 : 4 : 0 When applied for. 8. 3. 19 43.  
Travelling Expenses (if any) £ 0 : 10 : 0 When received. 19

Committee's Minute  
Assigned  
TUES. 16 NOV 1943  
see minute on Sld 28 Rpt.