

REPORT ON BOILERS.

No. 417.

22 MAR -5 JAN 1931

Received at London Office

Date of writing Report March 15th 1930 When handed in at Local Office 19 Port of Sheffield & CopenhagenNo. in Survey held at Sheffield & Nakskov Date, First Survey 17/1/30 18/1/30 Last Survey 12/3/30 17/12 1930
Reg. Book 90961 on the Ste Twin P. 4 No. "INDIA" (Number of Visits 4 7) Gross 9549.15
Tons Net 6030.63Built at Nakskov By whom built Nakskov Skibverft. Yard No. 39 When built 1930
Engines made at Copenhagen By whom made J. B. Jensen & Wain Engine No. 1718 1719 When made 1930
Boilers made at Sheffield By whom made Messrs Davy Bros. Ltd. Boiler No. 1979 When made 1930Owners To the Order of Messrs The Clarkson Thimble Tube Balm Co Ltd Port belonging to Copenhagen
OWNERS: N. A. Asiaticke Kompagni

VERTICAL DONKEY BOILER.

Made at Sheffield By whom made Davy Bros. Ltd. Boiler No. 1979 When made 1930 Where fixed On upper deck, inside engine casing.
Manufacturers of Steel Messrs The Parkgate Iron & Steel Co Ltd. Rotherham.
Total Heating Surface of Boiler 232 sq Is forced draught fitted yes Coal or Oil fired Oil and exhaust gas.
No. and Description of Boilers One Clarkson Thimble Tube. Working pressure 100 LB^sTested by hydraulic pressure to 200 LB^s Date of test 12/3/30 No. of Certificate 516Area of Firegrate in each Boiler — No. and Description of safety valves to each boiler Double 2" Spring.Area of each set of valves per boiler per rule 3.025 sq Pressure to which they are adjusted 100 lbs. Are they fitted with easing gear yes.
as fitted 6.282 sqState whether steam from main boilers can enter the donkey boiler N. main boiler. Smallest distance between boiler or uptake and bunkersor woodwork — Is oil fuel carried in the double bottom under boiler — Smallest distance between base of boiler and tank top platingIs the base of the boiler insulated — Largest internal dia. of boiler 4' 0" Height 7' 9"Shell plates: Material Steel Tensile strength 28/32 Thickness 7/16Are the shell plates welded or flanged no Description of riveting: circ. seams S. R. lap long. seams D. R. butt.Dia. of rivet holes in circ. seams 13/16 Pitch of rivets 2 1/8 Percentage of strength of circ. seams plate 61 of Longitudinal joint plate 73
long. seams 13/16 3.05 rivets 46 rivets 120
combined 107Working pressure of shell by rules 185 LB^s Thickness of butt straps outer 13/32 inner 13/32Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat. Material SteelTensile strength 26/30 Thickness 9/16 Radius — Working pressure by rules 360 LB^sDescription of Furnace: Plain, spherical, or dished crown Dished Material Steel Tensile strength 26/30Thickness 3/4 External diameter top 3' 1 1/8 Length as per rule 4' 4" Working pressure by rules 134 LB^s
bottom 3' 1 3/8Pitch 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 3' 0" Working pressure by rule —Thickness of Ogee Ring none. Diameter as per rule D Working pressure by rule 144 lbs.Combustion Chamber: Material — Tensile strength — Thickness of top plate —Radius if dished — Working pressure by rule — Thickness of back plate — Diameter if circular —Length as per rule — Pitch of stays — Are stays fitted with nuts or riveted over —Diameter of stays over thread — Working pressure of back plate by rules —Tube Plates: Material Circular. Steel Tensile strength 26/30 Thickness 3/4 Mean pitch of stay tubes in nests —If comprising shell, Dia. as per rule front — Pitch in outer vertical rows Circular 4.86 Dia. of tube holes FRONT stay — BACK Thimble tubes
back — Vertical 3" plain 2 3/4 plainIs each alternate tube in outer vertical rows a stay tube — Working pressure by rules Circular 134 LB^sGirders 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 ✓

Tubes: Material Steel External diameter { plain Thimble 2 3/4 ✓
Taper to 2" dia ✓ Thickness { 9 B.W.G. ✓

No. of threads per inch — Pitch of tubes 4.86 Circular, 3" Vertical. Working pressure by rules ✓

Manhole Compensation: Size of opening in shell plate ✓ Section of compensating ring ✓ No. of rivets and diameter

of rivet holes ✓ Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged ✓

Uptake: External diameter 1. 9 1/8 ✓ Thickness of uptake plate 9/16 ✓

Cross Tubes: No. ✓ External diameters { ✓ Thickness of plates ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
DAVY BROTHERS, LIMITED.
C. Astwood Manufacturer.

Dates of Survey { During progress of work in shops - - 17/1/30. 5/2/30. 19/2/30. 12/3/30. Is the approved plan of boiler forwarded herewith Yes
while building { During erection on board vessel - - 18/1/30. 25/1/30. 28/1/30. 4/2/30. 12/2/30. 14/2/30. 17/2/30. (If not state date of approval.)
Total No. of visits Four + seven.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been built under special survey and to the approved plan, the Materials have been tested in accordance with the rules and the workmanship is good.
This boiler is for shipment to - Messrs Aktieselskabet Nakskov Skibsvaerft. Nakskov, Denmark. for their Y^d N^o 39.

Marked No 516
LLOYD'S TEST
200 LBS
WP. 700
R.W.F. 12/3/30

The donkey boiler has been fitted on board the vessel under the supervision and to the satisfaction of the undersigned; it has been so arranged, that the boiler can be fired either by oil or by exhaust gas from the shaftboard main engine.
For feeding purposes a 75 x 50 x 75 mm duplex feed pump and a feed injector have been fitted and connected complete.
Recommend the vessel to have notation of O.B. 100 lb. in the Register Book.

Chuliffe
SURVEYOR TO LLOYD'S
REGISTER OF SHIPPING

Survey Fee ... £ 4 : 4 When applied for, 19
Travelling Expenses (if any) £ ✓ : ✓ : 4 When received, 5. 4. 30

R.W. Fawcett
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned See Opn F.C. 8405
TUE. 27 JAN 1931