

REPORT ON BOILERS.

No. 16298.
YKANO 4501.

Received at London Office

21 APR 1930

4-4-30.
Date of writing Report 12.4.29 19 When handed in at Local Office 12.4.29 19 Port of *Yokohama*
YOKOHAMA 7/12/29
No. in Survey held at *Lincoln & Yokohama* Date, First Survey 5/2/29 Last Survey 6-3-30.
Reg. Book
on the *Steel Screw Motor Vessel "MELBOURNE MARU"* (Number of Visits 9+3=12 Gross 5434 Tons Net 3234)
Built at *Yokohama* By whom built *Yokohama Dock Co* Yard No. *174* When built 1930
Engines made at *Copenhagen* By whom made *Burmeister & Wain, Ltd* Engine No. *174* When made 1930
Boilers made at *Lincoln* By whom made *Babcock & Wilcox Ltd* Boiler No. *73/4595* When made 1929
Owners *Osaka Shoen Kabushiki Kaisha* Port belonging to *Osaka*.

VERTICAL DONKEY BOILER.

Made at *Lincoln* By whom made *Babcock & Wilcox Ltd* Boiler No. *73/4595* When made 1929 Where fixed *Yokohama*.
Manufacturers of Steel *Partridge & Sons, Ltd.*
Total Heating Surface of Boiler *350 sq* Is forced draught fitted *no.* Coal or Oil fired *oil & kerosene*
No. and Description of Boilers *One, Clarkson, Waste Heat* Working pressure *100 lbs*
Tested by hydraulic pressure to *200 lb* Date of test *27 March 1929* No. of Certificate *266*
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler *Two spring loaded*
Area of each set of valves per boiler { per rule *4.56* as fitted *6.28* Pressure to which they are adjusted *100 lbs.* Are they fitted with easing gear *yes*
State whether steam from main boilers can enter the donkey boiler ☒ Smallest distance between boiler or uptake and bunkers
or 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 *5'-0"* Height *8'-3 7/8"*
Shell plates: Material *S.M. Steel* Tensile strength *28/32 J* Thickness *7/16"*
Are the shell plates welded or flanged *DR. lap* Description of riveting: circ. seams { end *S.R. + D.R. lap* long. seams *S.R. lap*
Dia. of rivet holes in { circ. seams *1 1/16"* Pitch of rivets *1 3/8" x 2 5/8"* Percentage of strength of circ. seams { plate *57.69* rivets *52.74* of Longitudinal joint { plate *69* rivets *74* combined *75*
Working pressure of shell by rules *133 lb* Thickness of butt straps { outer *7/16"* inner *7/16"*
Shell Crown: Whether complete hemisphere, dished partial spherical, or flat *Flat* Material *S.M. Steel*
Tensile strength *26-30 J.* Thickness *5/8"* Radius Working pressure by rules *230 lb*
Description of Furnace: Plain, spherical, or dished crown *dished* Material *S.M. Steel* Tensile strength *26/30 T*
Thickness *1 1/16"* External diameter { top *4'-15 1/8"* bottom *4'-15 1/8"* Length as per rule *5'-2 1/2"* Working pressure by rules *112 lb*
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 *3'-8"* Working pressure by rule *117 lb*
Thickness of Ogee Ring *7/8"* Diameter as per rule { D *4'-11 1/8"* d *4'-15 1/8"* Working pressure by rule *182 lb*
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 { front *S.M. Steel* back *S.M. Steel* Tensile strength { Thickness { Mean pitch of stay tubes in nests
If comprising shell, Dia. as per rule { front *4'-11 1/8"* back *4'-15 1/8"* Pitch in outer vertical rows { Dia. of tube holes FRONT { stay *4'-11 1/8"* plain *4'-15 1/8"* BACK { stay *4'-11 1/8"* plain *4'-15 1/8"*
Is each alternate tube in outer vertical rows a stay tube Working pressure by rules { front *117 lb* back *117 lb*
Girders to combustion chamber tops: Material Tensile strength Length as per rule Working pressure by rule

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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 _____ External diameter { plain 3 1/2 _____ stay _____ Thickness { 6 B.W.G. _____
 No. of threads per inch _____ Pitch of tubes _____ 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 _____ Thickness of uptake plate _____
Cross Tubes: No. _____ External diameters { _____ Thickness of plates _____
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

The foregoing is a correct description,

Annual Survey Request

H. Babcock & Wilcox (Lincoln Branch) Manufacturer.

Dates of Survey { During progress of work in shops - - { 1929 Feb. 5, 13, 22, 26 Apr. 1, 8, 15 - Is the approved plan of boiler forwarded herewith Yes
 while building { During erection on board vessel - - { 7/12/29, 24/1/30, 6/3/30 27 Apr. 4 (If not state date of approval.)
 Total No. of visits 9 + 3 = 12

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

This boiler has been built under special survey and in accordance with the Rules and approved plan.

The materials & workmanship are good.

The boiler has been despatched to Yokohama.

This case is a duplicate of Ins. Rpt. No 16297

Yokohama. This boiler has been securely fitted aboard this vessel and the boiler examined under steam. Safety valves adjusted under steam to 100 lbs per sq. inch and accumulation test carried out. all found satisfactory.

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

Committee's Minute

Assigned

FRI. 2 MAY 1930

See F.E. Rpt

W. G. McKeeney, Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation