

REPORT ON BOILERS.

No. 38385.

Received at London Office

-6 OCT. 1927

Date of writing Report

5 OCT 1927

When handed in at Local Office

615

1927

Port of

HULL

No. in Survey held at

Hull

Date, First Survey

20 May

Last Survey

1 Oct

1927

Reg. Book.

(Number of Visits

24)

Gross

338

Tons

Net

133

12705 on the

Ship S. T.

ST. MELANTE

Master

Built at

Bursley

By whom built

Cook, Wilmot & Gemmell Ltd

Yard No.

489

When built

1927

Engines made at

Hull

By whom made

Charles D. Holmes & Co Ltd

Engine No.

1315

When made

1927

Boilers made at

Hull

By whom made

do

Boiler No.

1315

When made

1927

Nominal Horse Power

96.4

Owners

T. Hambling & Co Ltd

Port belonging to

Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Hammesmännischen Werke, Hunsingen* (Letter for Record *S*)
Total Heating Surface of Boilers *1698 sq ft* Is forced draught fitted *ho* Coal or Oil fired *Coal*
No. and Description of Boilers *one single ended* Working Pressure *200 lbs*
Tested by hydraulic pressure to *350 lbs* Date of test *26/8/27* No. of Certificate *3617* Can each boiler be worked separately *✓*
Area of Firegrate in each Boiler *49.2 sq ft* No. and Description of safety valves to each boiler *2 Spring loaded*
Area of each set of valves per boiler { per Rule *4.9 sq ft* as fitted *4.9* Pressure to which they are adjusted *200 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 *4"* Is oil fuel carried in the double bottom under boilers *✓*
Smallest distance between shell of boiler and tank top plating *✓* Is the bottom of the boiler insulated *✓*
Largest internal dia. of boilers *14'-0"* Length *10'-8"* Shell plates: Material *Steel* Tensile strength *78/32 Tons*
Thickness *1 1/32"* Are the shell plates welded or flanged *✓* Description of riveting: circ. seams { end *D.R.* inter. *✓*
long. seams *T.R. 58.5* Diameter of rivet holes in { circ. seams *1 1/32"* Pitch of rivets { *8 3/4"*
Percentage of strength of circ. end seams { plate *65.83* rivets *51.2* Percentage of strength of circ. intermediate seam { plate *✓* rivets *✓*
Percentage of strength of longitudinal joint { plate *85.03* rivets *90.8* combined *88.83* Working pressure of shell by Rules *201 lbs*
Thickness of butt straps { outer *1"* inner *1 1/8"* No. and Description of Furnaces in each Boiler *Three plain*
Material *Steel* Tensile strength *78/30 Tons* Smallest outside diameter *44"*
Length of plain part { top *76* bottom *69* Thickness of plates { crown *13/16"* 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 *219 lbs*
End plates in steam space: Material *Steel* Tensile strength *78/30* Thickness *1 1/16"* Pitch of stays *18"*
How are stays secured *AN. & W* Working pressure by Rules *210*
Tube plates: Material { front *Steel* back *✓* Tensile strength { *78/30 Tons* Thickness { *15/16"*
Mean pitch of stay tubes in nests *10.94* Pitch across wide water spaces *13 3/4"* Working pressure { front *211 lbs* back *230*
Girders to combustion chamber tops: Material *Steel* Tensile strength *78/32 Tons* Depth and thickness of girder *✓*
at centre *10 1/2" x 13 1/4"* Length as per Rule *36 3/16"* Distance apart *9"* No. and pitch of stays *✓*
in each *3 @ 8 3/4"* Working pressure by Rules *210 lbs* Combustion chamber plates: Material *Steel*
Tensile strength *78/30 Tons* Thickness: Sides *3/4"* Back *23/32"* Top *3/4" & 23/32"* Bottom *3/4"*
Pitch of stays to ditto: Sides *9 x 8 3/4"* Back *9 x 8 1/2"* Top *9 x 8 3/4"* Are stays fitted with nuts or riveted over *Nuts*
Working pressure by Rules *230* Front plate at bottom: Material *Steel* Tensile strength *78/30*
Thickness *15/16"* Lower back plate: Material *Steel* Tensile strength *78/30 Tons* Thickness *29/32"*
Pitch of stays at wide water space *14 x 8 3/4"* Are stays fitted with nuts or riveted over *Nuts*
Working Pressure *228* Main stays: Material *Steel* Tensile strength *78/32 Tons*
Diameter { At body of stay, *3 1/4"* No. of threads per inch *8* Area supported by each stay *324 sq"*
Over threads *✓* Screw stays: Material *Steel* Tensile strength *78/30*
Working pressure by Rules *240 lbs* No. of threads per inch *10* Area supported by each stay *78.9*
Diameter { At turned off part, *1 1/8" & 1 3/4"* Over threads *✓*

Working pressure by Rules 230 Lb Are the stays drilled at the outer ends ho Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 2 1/8"
No. of threads per inch 10 Area supported by each stay 97.75 0" Working pressure by Rules 218
Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 5/16" + 3/16" No. of threads per inch 9
Pitch of tubes 4 7/8" Working pressure by Rules 215 Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 34 x 2 1/2 x 1 3/32" No. of rivets and diameter of rivet holes 32 @ 1 1/4"
Outer row rivet pitch at ends 8 7/8" Depth of flange if manhole flanged ✓ Steam Dome: Material ✓

Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓
Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint { Plate ✓ Rivets ✓
Internal diameter ✓ Working pressure by Rules ✓ Thickness of crown ✓ No. and diameter of stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓
How connected to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell ✓

Type of Superheater ✓ Manufacturers of { Tubes ✓ 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 ✓ Working pressure as per Rules ✓
Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure: tubes ✓, 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 23 inclusive for boilers been complied with ✓

The foregoing is a correct description,
Harold Sheard Director
F. PROCHARLES L. LINES & Co., Ltd. Manufacturer.

Dates of Survey { During progress of work in shops - - } See attached
while building { During erection on board vessel - - } report on Machinery

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓
Total No. of visits ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey & in accordance with the approved plan. The materials & workmanship are sound & good; the boiler has been satisfactorily fitted on board, tried under steam, and its safety valves adjusted as above.

Charged on engine report ✓
Survey Fee £ 100 When applied for, 192
Travelling Expenses (if any) £ 0 When received, 192

John H. Mackintosh
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FILE 7 OCT 1927
Assigned see Minute on Hull R/R
38385 attached