

REPORT ON BOILERS.

No. 34730

Date of writing Report 19 When issued in at Local Office 19 Port of *Sunderland*
No. in Survey held at *Sunderland* Date, First Survey *see Rpt 4* Last Survey 19
Reg. Book. on the *"LABOSIAN"* (Number of Visits) Gross 5106.5 Tons Net 2908.34
Built at *Sunderland* By whom built *Shipbuilding Corp. (Leam Branch)* Yard No. 11 When built 1947.
Engines made at *Bolton* By whom made *Nick Harprows & Co. Ld.* Engine No. *C.156* When made
Boilers made at *Glasgow* By whom made *J. Thompson (Mar. Eng.) Ld.* Boiler No. *5209/0* When made
Nominal Horse Power Owners *India Africa Co. Ld.* Port belonging to *Liverpool*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *1914* Is forced draught fitted *Yes* (Letter for Record *S*)
Total Heating Surface of Boilers *1914* Coal or Oil fired *oil*
No. and Description of Boilers *1 Single ended multitubular return water marine* Working Pressure *220*
Tested by hydraulic pressure to *380* Date of test No. of Certificate *B.C.* Can each boiler be worked separately
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler *Two Imp? high lift.*
Area of each set of valves per boiler { per Rule *5.080* Pressure to which they are adjusted *220 lb.* Are they fitted with easing gear *Yes*
as fitted *6.280*
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
Smallest distance between shell of boiler and tank top plating
Largest internal dia. of boilers *12'-9 1/2"* Length *11'-6"* Shell plates: Material *Steel* Tensile strength *29/33*
Thickness *1 1/4"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams { end *D.R. Up.*
inter. *349*
Pitch of rivets { *9 1/8"*
T.R.D.B.S. Diameter of rivet holes in { circ. seams *1 5/16"*
long. seams
Percentage of strength of circ. end seams { plate *65.3*
rivets *45.2*
Percentage of strength of longitudinal joint { plate *85.6*
rivets *84.8*
combined *89.4*
Thickness of butt straps { outer *1 1/8"*
inner
Material *Steel* No. and Description of Furnaces in each Boiler *3 Corrugated (height)*
Tensile strength *26/30* Smallest outside diameter *34 1/4"*
Length of plain part { top
bottom Thickness of plates { crown *19/32*
bottom Description of longitudinal joint *held*
Dimensions of stiffening rings on furnace or c.c. bottom
Plates in steam space: Material *Steel* Tensile strength *26/30* Thickness *1 7/32* Pitch of stays *19" x 16"*
Are stays secured *leather nuts*
Front plates: Material { front *Steel* Tensile strength { *26/30*
back Thickness { *1 5/16"* *25/32*
Pitch of stay tubes in nests *10 5/8" x 8 1/4"* Pitch across wide water spaces *14" x 8 1/4"*
Boilers to combustion chamber tops: Material *Steel* Tensile strength *28/32* Depth and thickness of girder
Centre *8 1/2" x 5/8" (2)* Length as per Rule *31 7/32* Distance apart *4" x 6"* No. and pitch of stays
Each *2 @ 1 3/4" x 10"* Combustion chamber plates: Material *Steel*
Tensile strength *26/30* Thickness: Sides *1/16"* Back *1/16"* Top *1/16"* Bottom *3/4"*
of stays to ditto: Sides *10" x 4"* Back *8" x 9 1/4"* Top *10" x 4"* Are stays fitted with nuts or riveted over *Nuts*
Plate at bottom: Material *Steel* Tensile strength *26/30* Thickness *27/32*
Lower back plate: Material *Steel* Tensile strength *26/30* Thickness *27/32*
of stays at wide water space *14" x 8"* Are stays fitted with nuts or riveted over *Nuts*
Stays: Material *Steel* Tensile strength *28/32*
At body of stay, *2 7/8"*
Over threads *3 1/4"* No. of threads per inch *6*
Stays: Material *Steel* Tensile strength *26/30*
At turned off part, *1 3/4"*
Over threads No. of threads per inch *9*

Are the stays drilled at the outer ends *no.* ✓ Margin stays: Diameter { At turned off part, or Over threads *1 1/8" x 2"* ✓
No. of threads per inch *9.* ✓ Thickness { *8 lb.* ✓ No. of threads per inch *9.* ✓
Tubes: Material *S.D. Steel* ✓ External diameter { Plain *3"* ✓ Stay *3"* ✓ Manhole compensation: Size of opening in
Pitch of tubes *4 1/4" x 4 1/8"* ✓ No. of rivets and diameter of rivet holes *40 @ 1 5/16"* ✓
shell plate *20 1/2" x 16 1/2"* ✓ Section of compensating ring *11 1/4" x 1 1/4"* ✓ No. of rivets and diameter of rivet holes *40 @ 1 5/16"* ✓
Outer row rivet pitch at ends *9 1/8"* ✓ Depth of flange if manhole flanged *3 3/8"* ✓ 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 _____ Thickness of crown _____ No. and diameter of
stays _____ Inner radius of crown _____ Diameter of rivet holes and pitch
How connected to shell _____ Size of doubling plate under dome _____
of rivets in outer row in dome connection to shell _____
Type of Superheater _____ Manufacturers of { Tubes _____ Steel forgings _____ 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 _____ Hydraulic test pressure
Pressure to which the safety valves are adjusted _____ and after assembly in place _____ Are drain cocks
tubes _____ forgings and castings _____
valves fitted to free the superheater from water where necessary _____
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____
The foregoing is a correct description, _____
Manufacture _____

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - } Total No. of visits _____

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. _____
GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler, constructed under special survey by British Corporation, has been securely fitted on board the vessel & safety valves adjusted under steam as above.*
B.C. Certificate attached herewith.

To recommendation please see machinery Rpt.

Survey Fee ... £ *See Machinery Rpt.* When applied for, _____
Travelling Expenses (if any) £ _____ When received, _____

J. H. H. H.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute _____
Assigned *See F.E. machinery rpt.*