

REPORT ON BOILERS.

No. 11325.

Received at London Office

24 FEB 1953

Report 21st Jan. 53. When handed in at Local Office 11th Feb. 53. Port of HONG KONG

Survey held at HONG KONG Date, First Survey 13th Dec., 1952 Last Survey 17th Jan., 1953.

Name S.S. "SAN EDUARDO" (Ex S.S. "TSINAN") (Number of Visits 24) Gross 2994 Tons Net 2100

3-12-52 Built at Hong Kong By whom built Taikoo Dkyd. & Eng. Co. of H.K., Ltd. Yard No 249 When built 1930

to 17-1- Hong Kong By whom made Taikoo Dkyd. & Eng. Co. of H.K., Ltd. Engine No 189 When made 1930

to 17-1- Hong Kong By whom made Taikoo Dkyd. & Eng. Co. of H.K., Ltd. Boiler No 189 When made 1930

12-52 to Power Owners Cambay Prince S.S. Co., Ltd. Port belonging to Hong Kong

17-1-53. Stbd.- in TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY. (Siemens Martin Mild Steel)

of Steel Not known - To H.K. Government Specification & Tests (Letter for Record S)

Surface of Boilers 2 @ 2468 i.e. 4936 Sq. Ft. Is forced draught fitted Forced Coal or Oil fired Both

Description of Boilers 2 in No. Cylindrical Multitubular Wet Backed Working Pressure 200 Lbs. Sq. In.

Hydraulic pressure to 350 Lbs. Date of test Build No. of Certificate Can each boiler be worked separately Yes

Rate in each Boiler 57.75 Ft. No. and Description of safety valves to each boiler 2 @ 2 1/2" dia. Cockburn McMicoll IHP

Set of valves per boiler per Rule as fitted 11.879 Sq. In. Pressure to which they are adjusted 200 Lbs. Are they fitted with casing gear Yes

Key boilers, state whether steam from main boilers can enter the donkey boiler

Space between boilers or uptakes and bunkers or woodwork 10 inches Is oil fuel carried in the double bottom under boilers Yes

Space between shell of boiler and tank top plating 18 inches Is the bottom of the boiler insulated Yes

Internal dia. of boilers 14'-9" Length 11'-7.7/32" Shell plates: Material Steel Tensile strength 28/32 tons

11/32" Are the shell plates welded or flanged Flanged Description of riveting: circ. seams end Double

Treble Diameter of rivet holes in circ. seams 1.11/32" Pitch of rivets 4.735" (inner) & 9.47" (outer row)

Strength of circ. end seams plate rivets Percentage of strength of circ. intermediate seam plate rivets

Strength of longitudinal joint plate rivets Working pressure of shell by Rules

and on 1.1/32" No. and Description of Furnaces in each Boiler 3 - Morrison

Steel Tensile strength 26/30 outside diameter 3'-9"

in part top Thickness of plates crown 19/32" Description of longitudinal joint

stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 1'-9" x 1'-4 1/2" (Max.)

secured Nuts back & front & caulked Working pressure by Rules

Material front 29/32 (steel) Tensile strength 26/30 Thickness 29/32"

back 25/32 (steel) Tensile strength 26/30 Thickness 25/32"

stay tubes in nests 8 1/4" x 12.3/8" Pitch across wide water spaces 12.3/8" Working pressure front back

combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder

2" (2 plates) Length 3'-0" Distance apart 9 1/2" (wings) 7" (centre) No. and pitch of stays

@ 9 1/2" x 8" Working pressure by Rules Combustion chamber plates: Material Steel

12 @ 7" x 8" Thickness: Sides 11/16" Back 21/32" Top 11.16" Bottom 3/4"

ditto: Sides 8" x 8" 9" x 7.1/8" Centre 9 1/2" x 7" Centre

Back 9" x 7.3/4" Wing Top 9 1/2" x 8" Wing Are stays fitted with nuts or riveted over Nuts

by Rules Front plate at bottom: Material Steel Tensile strength 26/30

9/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"

wide water space 9" x 7.3/4" Are stays fitted with nuts or riveted over Nuts

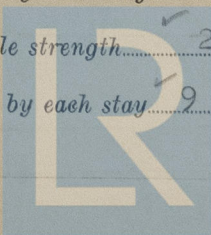
200 Lbs. Sq. In. Main stays: Material Steel Tensile strength

of stay 3" No. of threads per inch 6 per inch Area supported by each stay 1'-9" x 1'-4 1/2" (Max.)

reads 3.1/4" Screw stays: Material Steel Tensile strength 26/30

by Rules Middle 1.5/8" No. of threads per inch 9 per inch Area supported by each stay 9 x 7.3/4" (Max.)

Marginal 1.7/8" Corner 2.1/8"



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Working pressure by Rules. - Are the stays drilled at the outer ends. No Margin stays: Diameter ~~XXXXXX~~ or 1.7/8" (Over threads) ✓
No. of threads per inch 9" Area supported by each stay - Working pressure by Rules. -
Tubes: Material Steel ✓ External diameter { Plain 3" ✓ Thickness 8 LSG 30 @ 9", 38 @ 11" No. of threads per inch 9 per inch Stay 3" ✓ (with nuts) 24 @ 11/32"
Pitch of tubes 4.1/8" ✓ Working pressure by Rules. - Manhole compensation: Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 2'-10" x 2'-7" ✓ No. of rivets and diameter of rivet holes 32 @ 1.11/32"
Outer row rivet pitch at ends 9 1/2" ✓ Depth of flange if manhole flanged Not 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 North Eastern Marine ✓ Manufacturers of { Tubes. - Steel forgings. - Steel castings. -
Number of elements 53 per Boiler Material of tubes S/D Steel ✓ Internal diameter and thickness of tubes 17 mm x 2.5 mm
Material of headers Cast Steel ✓ Tensile strength - Thickness 7/8" ✓ Can the superheater be shut off and the boiler be worked separately No Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes
Area of each safety valve 2" dia. (single spring) 3.1416 Sq. In. Are the safety valves fitted with easing gear Yes ✓ Working pressure as per Rules - Pressure to which the safety valves are adjusted 202 Lbs. Sq. In. ✓ Hydraulic test pressure tubes 400 Lbs. Sq. In. forgings and castings 400 Lbs. Sq. In. and after assembly in place W.P. Are drain cocks valves fitted to free the superheater from water where necessary Yes

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

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 No (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 No If so, state Vessel's name and Report No. -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Boilers of this ship were constructed under the supervision of the Hong Kong Government who hold all certificates relating to materials & construction. These Boilers have further, until recently been regularly surveyed by the Surveyors to the Hong Kong Government Marine Department the vessel then holding a Passenger Certificate.

An internal & external examination held by the undersigned at this time showed Boilers doors & fastenings, chocks & ties, superheaters & all mountings in good conditions with scantlings maintained. Workmanship found good. Boilers later examined under steam, found in all respects satisfactory & safety valves have been adjusted to pressure stated.

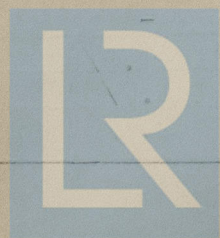
The Port & Starboard Boilers of this vessel (particulars of which are as above) are, in my opinion, eligible for inclusion in record LMC 1,53 as recommended in Rpt. 4 & Rpt. 9 now forwarded.

Survey Fee ... Charged on Rpt. 9 When applied for, 19...
Travelling Expenses (if any) £ : : When received, 19...

A. Y. Sinclair
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 21 APR 1953

Assigned



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Foundation