

REPORT ON BOILERS.

No. FE-7764

6 SEP 1960

Received at London Office

Date of writing Report 26th April, 1960 When handed in at Local Office 19 Port of KOBE

No. in Survey held at Osaka, Japan Date, First Survey 18th Nov., 1959 Last Survey 3rd February, 1960

on the (Number of Visits 12) Tons (Gross Net)

uilt at By whom built Yard No. 836 When built

gines made at By whom made Engine No. When made

ilers made at Osaka, Japan By whom made Hirano Iron Works, Co., Ltd. Boiler No. H-1100 When made 2,1960

ymers. Port belonging to

DESCRIPTION OF VERTICAL BOILER.

made at Osaka By whom made Hirano Iron Works Co. Boiler No. H1100 When made 2,1960 Where fixed

Manufacturers of Steel Plates:- Nippon Kokan K.K., Tsurumi Iron Works. Tubes:- Nippon Kokan K.K., Kawasaki

Total Heating Surface of each Boiler 100 M² Is forced draught fitted - Coal or Oil fired Oil

Name and Description of Boilers One Cochran type donkey boiler Working Pressure 7 kg/cm²

Tested by hydraulic pressure to 14 kg/cm² Date of test 3-2-1960 No. of Certificate -

Area of fire grate in each Boiler - No. and description of safety valves to each boiler -

Area of each set of valves per boiler (per Rule - as fitted -) Pressure to which they are adjusted - Are they fitted with easing gear -

State whether steam from main boilers can enter the donkey boiler - Smallest distance between boiler or uptake and bunkers

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 2400mm Height 6100mm

Shell plates: Material Boiler steel Tensile strength 49.7 - 49.9 kg/mm² Thickness Top & Bottom 16mm Middle 18mm

Are the shell plates welded or flanged - If fusion welded, state name of welding firm -

Have all the requirements of the Rules for Class I vessels been complied with - Description of riveting: circ. seams (end Double zigzag inter Double zigzag)

g. seams Double zigzag Double Butt Strap Dia. of rivet holes in (circ. seams 26.5 mm long. seams 23 mm) Pitch of rivets (75.4 mm 86.5 mm) Thickness of butt straps (outer 13 mm inner 16 mm)

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial Material Boiler steel Tensile strength 44.1 kg/mm² Thickness 23mm

Dia. 1900 mm Description of Furnace: Plain, spherical, or dished crown Spherical Material Boiler Steel

Tensile strength 44.4 kg/mm² Thickness 18 mm External diameter (top - bottom -) Length as per Rule -

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 1038 mm

Thickness of Ogee Ring 28 mm Diameter as per Rule (D. 2400 mm d. 2096 mm)

Combustion Chamber: Material - Tensile strength - Thickness of top plate -

Dia. if dished - 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 -

Shell Plates: Material (front Boiler steel back Boiler steel) Tensile strength (45.4 kg/mm² 45.4 kg/mm²) Thickness (30 mm 30 mm) Mean pitch of stay tubes in nests 240 mm

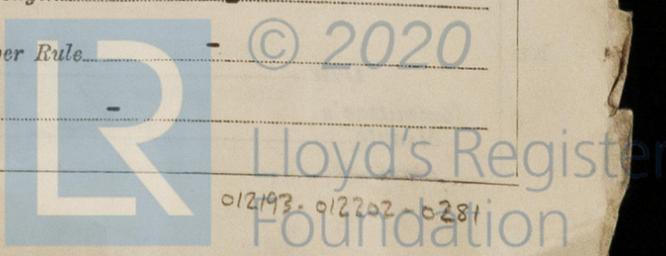
Comprising shell, dia. as per Rule (front - back -) Pitch in outer vertical rows (210 mm 210 mm) Dia. of tube holes FRONT (stay 70mm plain 66mm) BACK (stay 65mm plain 66mm)

Does each alternate tube in outer vertical rows a stay tube Yes

Plates to Combustion Chamber Tops: Material - Tensile strength -

Thickness and thickness of girder at centre - Length as per Rule -

Distance apart - No. and pitch of stays in each -



Crown Stays: Material _____ Tensile strength _____ Diameter { at body of stay, _____ or over threads _____

No. of threads per inch _____ Screw Stays: Material _____ Tensile strength _____

Diameter { at turned off part, _____ or over threads _____ No. of threads per inch _____ Are the stays drilled at the outer ends _____

Tubes: Material O.H. steel External diameter { plain 65 mm ✓ stay 65 mm ✓ Thickness { 3.5 mm ✓ 8 mm ✓

No. of threads per inch 9 ✓ Pitch of tubes 90 x 105 mm ✓

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

of rivet holes _____ Outer row rivet pitch at ends _____ Depth of flange if manhole flanged 85 mm ✓

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 Yes

The foregoing is a correct description,

Hueda Manufactured by HIRANO IRON WORKS CO., LTD.

Dates of Survey while building { During progress of work in shops - - 1959:- Nov.18,24, Dec. 3,14,16 1960:- Jan.11,14,23,25,26,28, Feb.,3 } Is the approved plan of boiler forwarded herewith 13-1-1960 (if not state date of approval.) Total No. of visits 12

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 has been constructed under Special Survey in accordance with the Rules, approved plans and Secretarial letters.

The material and workmanship are sound and good.
The boiler has been examined under hydraulically and found good.

Description	Roll No.	Charge No.	Name of Maker
Shell Cover	D 2931	T 9413	Nippon Kokan K.K., Tsunami Iron Works
Top Shell	D 2173	T 9108	- do -
Bottom Shell	"	"	- do -
Middle Shell	C 9981	T 6833	- do -
Tube Plate (Front)	D 337	T 9562	- do -
Tube Plate (Back)	D 205	T 9562	- do -
Furnace	D 7856	T 6115	- do -
Ogee-Ring	D 2080	T 9734	- do -
Outer Butt Strap	D 8404	K 4478	- do -
Inner Butt Strap	D 2173	T 9108	- do -

Survey Fee ... £ 24,750.- When applied for MAY 12 1960
Travelling Expenses (if any) £ 3,700.- When received 19

Date FRIDAY 14 OCT 1960
Committee's Minute See Rpt. 1

Engineer Surveyor to Lloyd's Register of Shipping
M. Hayashibara
Lloyd's Register Foundation