

REPORT ON BOILERS.

No. FE-8689

10 APR. 1961

Received at London Office

Date of writing Report 28th Feb., 1961 When handed in at Local Office MAR 30 1961 Port of KOBE

No. in Survey held at Osaka & Innoshima, Japan Date, First Survey 23rd July, 1960 Last Survey 26th October, 1960

Reg. Book. on the m.v. "M.H. THAMRIN" (Number of Visits 19) Tons { Gross Net

Built at Innoshima, Japan By whom built Hitachi S.B. & Eng. Co., Ltd, Innoshima Shipyard Yard No. 3902 When built 1961-2

Engines made at Kobe, Japan By whom made Kawasaki Dockyard Co., Ltd. Engine No. 6079 When made 1960-12

Boilers made at Osaka, Japan By whom made Hirano Iron Works Co., Ltd. H1303 1960-10

Owners Diakarta Lloyd N.V. (Indonesia) Port belonging to Djakarta

VERTICAL BOILER.

Made at Osaka By whom made Hirano Iron Works Co., Ltd. Boiler No. H1303 When made Oct., 60 Where fixed Osaka

Manufacturers of Tubes:- Nippon Tokushu Steel Tube Co., Ltd., Tokyo Works
Kawasaki Steel & Amagasaki Steel Mfg. & Japan Steel Works, Muroran Plant

Total Heating Surface of each Boiler 60.04 M² Is forced draught fitted None Coal or Oil fired Oil 100 kg/cm²

No. and Description of Boilers One (1) Cochran Type Donkey Boiler Working Pressure 7 kg/cm²

Tested by hydraulic pressure to 14.0 kg/cm² Date of test 26th October, 1960 No. of Certificate I-66652

Area of fire grate in each Boiler - No. and description of safety valves to each boiler One - double spring 55mm dia. improved high lift

Area of each set of valves per boiler { per Rule As approved 2290 mm² Pressure to which they are adjusted 7.2 kg/cm² Are they fitted with easing gear Yes
as fitted 4650 mm²

State whether steam from main boilers can enter the donkey boiler - Smallest distance between boiler or uptake and bunkers or woodwork 4,600 mm Is oil fuel carried in the double bottom under boiler No Smallest distance between base of boiler and tank top plating 5,375 mm

Is the base of the boiler insulated No Largest internal dia. of boiler 2000mm ✓ Height 5250mm ✓

Shell plates: Material Boiler Steel ✓ Tensile strength Upper Middle Lower 46.9 kg/mm² 46.9 kg/mm² 51.1 kg/mm² Thickness 14 mm ✓

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

Have all the requirements of the Rules for Class I vessels been complied with Yes Description of riveting: circ. seams { end Double zigzag ✓
inter Double zigzag ✓

long. seams Double butt strap Dia. of rivet holes in { circ. seams 23 mm ✓ Pitch of rivets { 68.77 mm ✓ Thickness of butt straps { outer 14 mm ✓
long. seams 20 mm ✓ { 84 mm ✓ inner 14 mm ✓

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished partial Material Boiler steel Tensile strength 43.6 kg/mm² Thickness 22mm ✓

Radius 1600 mm ✓ Description of Furnace: Plain, spherical, or dished crown Spherical ✓ Material Boiler steel

Tensile strength 44.3 kg/mm² ✓ Thickness 15 mm ✓ External diameter { top - Length as per Rule -
bottom -

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 865 mm ✓

Thickness of Ogee Ring 22 mm ✓ Diameter as per Rule { D 2000mm ✓
d 1728 mm ✓

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

Radius 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 -

Tube Plates: Material { front Boiler steel ✓ Tensile strength { 42.9 kg/mm² ✓ Thickness { 25 mm ✓ Mean pitch of stay tubes in nests 317 mm ✓
back Boiler steel ✓ { 42.9 kg/mm² ✓ { 25 mm ✓

If comprising shell, dia. as per Rule { front - Pitch in outer vertical rows { 188 mm ✓ Dia. of tube holes FRONT { stay 71 mm ✓ BACK { stay 65 mm ✓
back - { 188 mm ✓ { plain 66 mm ✓ { plain 66 mm ✓

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

Girders to Combustion Chamber Tops: Material - Tensile strength -

Depth 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 ✓ 8.0 mm ✓
No. of threads per inch 9 Pitch of tubes 88 x 94 mm
Manhole Compensation: Size of opening in shell plate 305mm x 405 mm Section of compensating ring - No. of rivets and diameter 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,

T. Ueda Manufacturer.
HIRANO IRON WORKS CO., LTD.

Dates of Survey while building { During progress of work in shops - - 1960 July 23, 25 Aug. 1, 4, 20, 26 Sept. 14, 16, 21, 24, 29, 30 Oct. 1, 4, 7, 8, 15, 19, 26 Is the approved plan of boiler forwarded herewith (If not state date of approval.)
During erection on board vessel - - 1961 Jan 12, 19, 25, Feb. 2, 8, 10, 16, 17 Total No. of visits 19 + 8 Total 27

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "SETIABUDHI"

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 Secretary's letters.
The material and workmanship are sound and good.
The boiler was examined under hydraulically and found satisfactory.

Description	Roll No. Inspection No. Plate No.	Charge No.	Name of Maker
Shell Crown	10/11	350525	Japan Steel Works, Muroran Works
Upper & Lower Shell	OJ8478	C2-7710	Kawasaki Steel Corporation
Middle Shell	OJ5760	C3-7402	do.
Tube Plate	30377	7372	Fuji Iron & Steel Co., Ltd.
Furnace Crown	F 2664	H 793	Amagasaki Iron & Steel Mfg. Co., Ltd.
Ogee Ring	2/6	350423	Japan Steel Works, Muroran Works
Outer Butt-strap	OJ 8470	C2-7710	Kawasaki Steel Corporation
Inner butt-strap	OJ 8470	C2-7710	do.

The above described boiler has been installed on board the m.v. "M.H. THAMRIN" at Innoshima and also accumulation test was carried out in accordance with the Rules and found satisfactory.

Survey Fee ... £22,500.- When applied for 19
Travelling Expenses (if any) £ - : When received 19

Peter Manson *M. Kamakura* *S. Hashiguchi*
Engineer Surveyor to Lloyd's Register of Shipping.
P. Manson, M. Kamakura & S. Hashiguchi

THURSDAY - 1 JUN 1961

Date
Committee's Minute