

REPORT ON ~~EXHAUST GAS HEAT EXCHANGER~~ BOILERS.

No. 1422

Received at London Office

14 JUL 1953

of writing Report 19 When handed in at Local Office 8 JUL 1953 Port of KOBE

Survey held at Osaka, Japan Date, First Survey 29th Nov., 1952 Last Survey 2nd May, 1953.

on the Steel Single Screw M.V. "SHOSEI MARU" (Number of Visits 9) Gross 7199.23 Tons Net 4175.29

at Osaka, Japan By whom built Fujinagata Shipbuilding Co., Ltd. Yard No. 30 When built May, 1953.

engines made at Tamano, Japan By whom made Mitsui Shipbuilding & Eng. Co., Ltd. Engine No. 486 When made Feb., 1953.

boilers made at Osaka, Japan By whom made Fujinagata Shipbuilding Co., Ltd. Boiler No. B-477 When made May, 1953.

owners Matsuoka Kisen K.K. Port belonging to Ashiya, Japan

/EXHAUST GAS
VERTICAL ~~BOILER~~ HEAT EXCHANGER in Conjunction with Multitubular Boilers.

made at Osaka By whom made Fujinagata Shipbuilding Co., Ltd. Boiler No. B-477 When made May-1953 Where fixed in Funnel

manufacturers of Steel Yawata Iron & Steel Mfg., Co., Ltd., Yawata, Japan

total Heating Surface of Boiler 116.4M² Is forced draught fitted No Coal or Oil fired Exhaust Gas only

and Description of Boilers 1 x Main Engine Exhaust Gas Working Pressure 10 kg/cm²

tested by hydraulic pressure to 18.5kg/cm² Date of test 23-3-53 No. of Certificate -

area of fire grate in each Boiler - No. and description of safety valves to each boiler 2 x Spring Loaded Ordinarily Type

area of each set of valves per boiler { per Rule As approved 39.226cm² Pressure to which they are adjusted 10.2kg/cm² Are they fitted with easing gear Yes ✓

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 Yes Largest internal dia. of boiler 2,200mm Height 4,290mm

shell plates: Material O.H. Steel Tensile strength 48.7kg/mm² Thickness 16mm

the shell plates welded or flanged No If fusion welded, state name of welding firm -

all the requirements of the Rules for Class I vessels been complied with - Description of riveting: circ. seams { end - inter -

Double Butt Strap Double Riveted joint Dia. of rivet holes in { circ. seams 23mm Pitch of rivets { 88mm Percentage of strength of circ. seams { plate - rivets -

longitudinal joint { plate 76 rivets 78.5 Thickness of butt straps { outer 14mm inner 14mm Shell Crown: Whether complete hemisphere, dished partial

Material O.H. Steel Tensile strength 43.8kg/mm² Thickness 22mm

Description of Furnace: Plain, spherical, or dished crown - Material -

Thickness - External diameter { top - bottom - Length as per Rule -

of support stays circumferentially - and vertically - Are stays fitted with nuts or riveted over -

Radius of spherical or dished furnace crown -

Diameter as per Rule { D - d -

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

Thickness of back plate - Diameter if circular -

Pitch of stays -

Diameter of stays over thread -

Plates: Material { front Top O.H. Steel Tensile strength 43.8kg/mm² Thickness 22mm Mean pitch of stay tubes in nests 285mm x 270mm

prising shell, dia. as per Rule { front - back - Pitch in outer vertical rows { TOP 70mm BOTTOM 70mm

alternate tube in outer vertical rows a stay tube Yes ✓

to Combustion Chamber Tops: Material - Tensile strength -

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

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 65mm stay 65mm } Thickness { 3.5mm 8mm }
No. of threads per inch 9 Pitch of tubes 95mm x 90mm
Manhole Compensation: Size of opening in shell plate 413mm x 528mm Section of compensating ring 466mm² No. of rivets and diam
of rivet holes 52x23mm Outer row rivet pitch at ends 85mm Depth of flange if manhole flanged 80mm
Uptake: External diameter 812mm Thickness of uptake plate 6mm
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,

Fujinagata Shipbuilding Co., Ltd. S. Hasegawa Manufact

Dates of Survey while building During progress of work in shops - - 1952 29-11 1953 2-2, 12-2, 11-3, 23-3 10-4, 22-4, 30-4, 2-5 Is the approved plan of boiler forwarded herewith 5-1-53 (If not state date of approval.) Total No. of visits 9

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 Exhaust Gas Heat /Exchanger of this vessel has been constructed under Special Survey in accordance with the Rules, Approved Plans and Secretary's Letters.

The Materials and Workmanship are sound, good and free from defect. The exhaust gas Heat /Exchanger has been examined under steam and the safety valves adjusted to 10.2kg/cm² and found satisfactory.

Survey Fee ... £ 420,000 When applied for 8 JUL 1953
Travelling Expenses (if any) £ : : When received 19

Date FRIDAY 28 AUG 1953
Committee's Minute See F.E. mch - rpt.

S. B. Johnson Engineer Surveyor to Lloyd's Register of Shipping
Lloyd's Register Foundation