

## REPORT ON BOILERS.

No. 8784

Received at London Office

THU. 1 NOV. 1923

Date of writing Report

191

When handed in at Local Office

191

Port of

Belfast

Last Survey

191

No. in Survey held at

Reg. Book.

New Steel S.S. "Malaja"

(Number of Visits)

Gross 2082 1/2  
Tons Net 128 30.

Master

Built at

Belfast

By whom built

Harland &amp; Wolff Ltd

When built 1923

Engines made at

Belfast

By whom made

Harland &amp; Wolff Ltd

When made 1923

Boilers made at

Belfast

By whom made

Harland &amp; Wolff Ltd

When made 1923

Registered Horse Power

Owners Peninsula Oriental Steam Nav Co

Port belonging to Belfast

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~—Manufacturers of Steel D. Schiller & Sons Ltd

(Letter for record 5) Total Heating Surface of Boilers 6114 sq ft Is forced draft fitted Yes No. and Description of

Boilers Two Single Ended. Working Pressure 215 Tested by hydraulic pressure to 345 Date of test 28-3-23

No. of Certificate 824 Can each boiler be worked separately Yes Area of fire grate in each boiler oil fuel No. and Description of

safety valves to each boiler Two spring loaded Area of each valve 11.04 sq ft Pressure to which they are adjusted 220 lbs.

Are they fitted with easing gear Yes 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 20" INSIDE Mean dia. of boilers 16'-3" Length 11'-8"

Material of shell plates Steel Thickness 1 3/16" Range of tensile strength 30-133 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams double long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 9/16" Pitch of rivets 10 1/4"

Lap of plates or width of butt straps 23" Per centages of strength of longitudinal joint rivets 90.8 Working pressure of shell by

rules 215 lbs. Size of manhole in shell 16" x 12" Size of compensating ring 20-28 x 30 x 1 1/2" No. and Description of Furnaces in each

boiler 1 Corrugated Material Steel Outside diameter 3'-4 1/2" Length of plain part top 1 1/2" Thickness of plates crown 5/8"

Description of longitudinal joint Weld No. of strengthening rings Working pressure of furnace by the rules 226 1/2 lbs. Combustion chamber

plates: Material Steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 1 1/2" Pitch of stays to ditto: Sides 8 1/4 x 8 1/4 Back 8 3/4 x 7 1/2"

Top 8 1/4 x 8 If stays are fitted with nuts or riveted heads No Working pressure by rules 215 lbs. Material of stays Steel Area at

smallest part 1 1/2 x 7 Area supported by each stay 68 sq ft Working pressure by rules 224 lbs. End plates in steam space: Material Steel Thickness 1 1/8"

Pitch of stays 1 1/2 x 1 1/2 How are stays secured D.H. Bolt Working pressure by rules 221 lbs. Material of stays Steel Area at smallest part 2 3/4"

Area supported by each stay 296 3/4 sq ft Working pressure by rules 221 lbs. Material of Front plates at bottom Steel Thickness 7/8" Material of

Lower back plate Steel Thickness 7/8" Greatest pitch of stays 12 1/4 x 7 1/2 Working pressure of plate by rules 281 lbs. Diameter of tubes 2 3/4"

Pitch of tubes 1 1/2 x 1 1/2 Material of tube plates Steel Thickness: Front 7/8" Back 1 1/2" Mean pitch of stays 9 x 8" Pitch across wide

water spaces 13 1/4 x 9 Working pressures by rules 331 lbs. Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 20 9 x 7 1/2 Length as per rule 34" Distance apart 8" Number and pitch of Stays in each 3 @ 8 1/4"

Working pressure by rules 239 lbs. Steam dome: description of joint to shell None % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Tubular Date of Approval of Plan 13-2-22 Tested by Hydraulic Pressure to 430 lbs.

Date of Test Oct 5th 1923 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2" Pressure to which each is adjusted 220 lbs. Is Easing Gear fitted Yes

FOR HARLAND &amp; WOLFF LTD

The foregoing is a correct description,

Manufacturer.

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits

Dates of Survey  
During progress of work in shops - -  
while building - -  
During erection on board vessel - -

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &amp;c.)

These Boilers have been built under special survey, materials &amp; workmanship good. Hydraulic tests satisfactory.

Survey Fee ... £

Travelling Expenses (if any) £

When applied for, 191

When received, 191

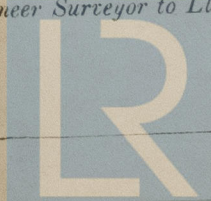
TUE NOV. 6 1923

Committee's Minute

Assigned

William Butler

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation



Belfast.

Y S S "Malaja"

List of Spare Gear.

Bilers: 9 sets Manhole doors for one D.E. Blr + 1 set ditto for one S.E. Blr  
Safety valve springs for D.E. Blrs + 2 ditto for S.E. Blrs 2 ditto for superheater valves.  
100 Bl tubes & drain plugs, 4 Main & 4 Air feed check valves with spindles.

Oil fuel: 14 Burners with working tips 146 assorted tips, 60 atomiser strainers  
14 flame cones, 6 air cones, 2 furnace doors, 6 burner supply pipes, 2 pump governors  
2 suction & 2 discharge strainer baskets, 3 brass cased thermometers

Oil Transfer Pp: 1 steam valve chest complete 1 steam piston & rod complete  
1 pump bucket complete 1 set suction & delivery valves for 1 pump.

Oil fuel pps: 1 set steam valve chest liners, pistons & valve rods, 1 rod  
complete, 1 steam piston complete, 1 pump bucket complete, 1 set suction &  
delivery valves for 1 pump.

Boiler draft: 4 Portable Air gauges.

Main Engines: 1 H.P. Cyh cones complete, 60 assorted studs for cyhs 18 gland  
studs, 1 escape valve spring for each cyh, 1 G.M. Gland in halves for one 1st & 2nd H.P. H.P. cyh  
& pistons complete for one engine with 2 sets of rings.

Piston rods complete 1 set metallic packing for one engine.

2 pairs H.P. & I.P. piston rod crosshead brasses with bolts complete.

2 " Crank pin brasses with bolts complete.

2 H.P., 2 I.P. & 2 2nd I.P. piston valves with liners complete. 1 Slide Valve

1 set of valve spindles complete for one engine.

1 set of ahead & astern cheques complete for one engine

2 eccentric straps complete

8 strips W. Metal for guide shoes, 12 x head shoe bolts, 2 Main Bearing bolts complete.

Condenser: 100 tubes 225 ferrules 10 lbs packing.

One Sail shaft complete 4 propeller blades, 2 sets propeller blade studs nuts

2 sets coupling bolts & nuts, Legium Vitae strips for stem tube of 1 engine.

1 escape valve spring for each ring fitted, Assorted bolts nuts & iron.

Centrifugal (motor) circulating pump: 1 Impeller & spindle complete.

Air pumps: 1 piston & rods & 1 pp rod & bucket complete, 1 set valves with plate

complete for head & foot valve for 1 pp, 2 sets rings for piston & bucket.

Main feed pps: 2 sets suction & delivery valve seats with valves & guards complete.

for 1 pump. 2 pp rods & buckets complete, 1 steam chest & valve complete,

Edge ball & sanitary pumps: 2 suction & 2 discharge valve seats with guards &

valves complete, 2 sets of rings for buckets & pistons, 2 bucket rods, 1 steam

chest & valve complete

Wearily feed pp: 2 suction & 1 discharge valve seat with valves & guards complete

1 set valves w/o emergency dilge pps fresh water pp.

Boiler draft fans: 2 armatures for motors

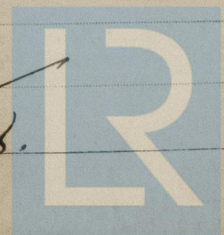
Main & Auxiliary feed water filters: one set of internal gear for

each side of duplex filters.

Granulation filters: 1 set & go complete with filtering material

for one twin filter

William Butler.



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