

## REPORT ON MACHINERY.

No. 10724

Received at London Office

TUE. OCT. 19 1920

Writing Report 14<sup>th</sup> Oct. 1920 When handed in at Local Office 18<sup>th</sup> Oct. 1920 Port of Southampton  
 Survey held at Comes, Isle of Wight Date, First Survey 12<sup>th</sup> Dec. 1919. Last Survey 14<sup>th</sup> Oct. 1920  
 Book. (Number of Visits 23.)

on the S.S. RIVER WEAR  
 Built at Comes By whom built J. S. White & Co. Ltd  
 When built 1920  
 By whom made J. S. White & Co. Ltd when made 1920  
 By whom made J. S. White & Co. Ltd when made 1920  
 Owners John Saunders & Co. Port belonging to Merchant.

Horse Power as per Section 28 120 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

INES, &c.—Description of Engines Triple Expansion, Surface Condensers No. of Cylinders 3 No. of Cranks 3  
 of Cylinders 15"-25½"-41" Length of Stroke 30" Revs. per minute 100 Dia. of Screw shaft 8.32 as per rule 8.55 Material of Steel  
 as fitted 9.25 screw shaft  
 Is the after end of the liner made water tight yes  
 If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part  
 Is the space charged with a plastic material insoluble in water and non-corrosive — If two  
 Length of stern bush 3'-0½"

of Tunnel shaft 7.75 as per rule 8.16 as fitted 8.25 Dia. of Crank shaft journals 8.25 as per rule 8.25 as fitted 8.25 Dia. of Crank pin 8.25 Size of Crank webs 5½" Dia. of thrust shaft under  
 of Feeds 8½" Dia. of screw 10'-6" Pitch of Screw 11'-6" No. of Blades 4 State whether moveable No Total surface 37 ft

of Bilge pumps 2 Diameter of ditto 2¼" Stroke 15" Can one be overhauled while the other is at work yes  
 of Donkey Engines 2 Sizes of Pumps 7x5x8" & 7x5x10" No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room 2-2½" and 2-2" In Holds, &c. 3-2" for Holdwell.

of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump C. Pump Is a separate Donkey Suction fitted in Engine room & size yes. 2½"

all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yes  
 all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above  
 they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

all pipes are carried through the bunkers None How are they protected —  
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

ERS, &c.—(Letter for record S) Manufacturers of Steel The Port Talbot & The Parkgate Steel Co. Ltd

Heating Surface of Boilers 2127 ft Is Forced Draft fitted No No. and Description of Boilers One Cylindrical, Return Tube  
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 Date of test 20-9-20 No. of Certificate 335

each boiler be worked separately — Area of fire grate in each boiler 56.25 ft No. and Description of Safety Valves to  
 boiler 2 Spring Loaded Area of each valve 5.939 ft Pressure to which they are adjusted 183 lbs. Are they fitted with easing gear yes

Best distance between boilers or uptakes and bunkers or woodwork 4" Mean dia. of boilers 15'-0" Length 10'-9" Material of shell plates Steel  
 thickness 1½" Range of tensile strength 28-32 Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams D.R. LAP.

seams T.R. BUTT Diameter of rivet holes in long. seams 1½" Pitch of rivets 9½" Lap of plates or width of butt straps 1'-7½"  
 percentages of strength of longitudinal joint 86.9% Working pressure of shell by rules 184.3 Size of manhole in shell 12x16"

of compensating ring 2-9¾x2-5¾ No. and Description of Furnaces in each boiler 3. Corrugated Material Steel Outside diameter 3'-9¼"  
 of plain part top Thickness of plates bottom 9/16" Description of longitudinal joint Welded No. of strengthening rings —

Working pressure of furnace by the rules 194.7 Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 21/32" Top 11/16" Bottom 23/32"  
 of stays to ditto: Sides 9¼x8½" Back 9½x8½" Top 10x9" If stays are fitted with nuts or riveted heads None Working pressure by rules 183.1 lbs.

Material of stays Steel Area at smallest part 1.79 ft Area supported by each stay 80.75 Working pressure by rules 199.5 End plates in steam space:  
 Material Steel Thickness 1¼" Pitch of stays 19½x20½" How are stays secured Double Nuts Working pressure by rules 184.8 Material of stays Steel

at smallest part 6.95 Area supported by each stay 399.75 Working pressure by rules 181 Material of Front plates at bottom Steel  
 thickness 1" Material of Lower back plate Steel Thickness 27/32" Greatest pitch of stays 13x9.5" Working pressure of plate by rules 189.8

Material of tubes Steel Pitch of tubes 4½x4½" Material of tube plates Steel Thickness: Front 1" Back 25/32" Mean pitch of stays 9x9"  
 across wide water spaces 14" Working pressures by rules 182.8 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9¼x¾(2) Length as per rule 2'-10" Distance apart 9" Number and pitch of stays in each 2 off. 10"  
 Working pressure by rules 180.6 Steam dome: description of joint to shell — % of strength of joint —

Material — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —  
 of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

ERHEATER. Type — Date of Approval of Plan — Tested by Hydraulic Pressure to —  
 of Test — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —

Material of Safety Valve — Pressure to which each is adjusted — Is Easing Gear fitted —



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Conn. Rod top-end bolts & nuts. 2 Conn. Rod bottom-end bolts & nuts. 2 Main Bearing bolts & nuts. 1 Set of Coupling bolts. 1 Feed Pump action & 1 delivery valve. 1 Bilge Pump action & 1 delivery valve. 50 Assorted bolts & nuts. 12 Jacking studs & nuts. Flat & round bar iron of various sizes. 1 Escape valve spring of each size. 2 Pump link brasses. 36 Condenser Tubes. 24 Boiler Tubes. 1 Set of Safety Valve springs. 2 Feed check valves. 1 Propeller.

The foregoing is a correct description,

For J. Samuel White & Company, Ltd.,

J. Marshall  
Manufacturer.  
General Manager.

Dates of Survey while building  
During progress of work in shops -- 1919. 12. 1920. 1. 2. 3. 4. 5. 6. 7. 8.  
During erection on board vessel -- 19.27. 3.10.20. 6.11.12.14.  
Total No. of visits 23

Is the approved plan of main boiler forwarded herewith No

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 10-5-20 Slides 21-6-20 Covers 10-5-20 Pistons 21-6-20 Rods 21-6-20

Connecting rods 21-6-20 Crank shaft 6-5-20 Thrust shaft 11-6-20 Tunnel shafts Screw shaft 29-3-20 Propeller 29-7-20

Stern tube 21-6-20 Steam pipes tested 20-9-20 Engine and boiler seatings 29-7-20 Engines holding down bolts 19-8-20

Completion of pumping arrangements 19-8-20 Boilers fixed 6-10-20 Engines tried under steam 11-10-20

Completion of fitting sea connections 11-8-20 Stern tube 11-8-20 Screw shaft and propeller 11-8-20

Main boiler safety valves adjusted 14-10-20 Thickness of adjusting washers P = 37/64 S = 25/32

Material of Crank shaft Steel Identification Mark on Do. N° 1546 29-3-20 A.H.B. Material of Thrust shaft Steel Identification Mark on Do. N° 1546 29-3-20 A.H.B.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. N° 1546 29-3-20 A.H.B.

Material of Steam Pipes Copper Test pressure 360 lbs sq

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case yes If so, state name of vessel S.S. "BILTON"

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery & Boilers have been built under Special Survey and during erection on board. The materials & workmanship being sound and good.

The Spare gear is in order with the rule requirements.

On Trial the machinery and boiler proved satisfactory, and the same is eligible in my opinion to have notation + L.M.C. 10.20.

+ L.M.C. 10.20

Kell

20/10/20

A.P.K.

The amount of Entry Fee ... £ 2 : 0 :  
Special ... £ 18 : 0 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 3 : 0 :  
When applied for, 18 Oct 1920.  
When received, 27.11.20

A.H. Boyle  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. OCT. 26 1920

Assigned

+ L.M.C. 10.20

CERTIFICATE WRITTEN



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Foundation