

REPORT ON MACHINERY

No. 11254

Date of writing Report 20 March 1922 When handed in at Local Office 24 March 1922 Port of Middlesbrough
 No. in Survey held at Middlesbrough Date, First Survey 1st Nov 20 Last Survey 8 March 1922
 Reg. Book. 34190 on the steel screw steamer "Egyptiana" (Rt. Co. Engin. No. 2564) (Number of Visits 101)
 Master ✓ Built at Haverton Hill on Tyne By whom built Harness Shipbuilding Co. Ltd. Tons { Gross 3491.08
 Engines made at Middlesbrough By whom made Richardsons, Westgarth & Co. Ltd. Net 1801.33
 Boilers made at ✓ By whom made ✓ When built 1922
 Registered Horse Power ✓ Owners Harness, Worthy & Co. Ltd. when made 1922
 Nom. Horse Power as per Section 28 538 Is Refrigerating Machinery fitted for cargo purposes no when made 1922
 Port belonging to Liverpool Is Electric Light fitted yes

ENGINES, &c.—Description of Engines

Inverted triple expansion

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26" 43" 43" Length of Stroke 48" Revs. per minute ✓ Dia. of Screw shaft as per rule 14.5" Material of Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight
 in the propeller boss yes If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 6" - 2 1/2"

Dia. of Tunnel shaft as per rule 13.6" Dia. of Crank shaft journals as per rule 13.11" Dia. of Crank pin 14 1/2" Size of Crank webs 24 1/2" x 9" Dia. of thrust shaft under
 collars 14 1/4" Dia. of screw 14" - 3" Pitch of Screw 18" - 0" No. of Blades 4 State whether moceable no Total surface 95 ft

No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 8" x 5 1/2" x 8" : 9" x 11" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 of 3 1/2" and 4 of 2 1/2" in Cofferdams In Holds, &c. Forward: 6 of 3 1/2" and 1 of 2 1/2" in Auct
Keel: 11" H 2 of 3 1/2" 11" S 1 of 3 1/2" Deep Tank 2 of 3 1/2" Tunnel Ball 1 of 2 1/2"
 No. of Bilge Injections two sizes 8" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes: 3 1/2"

Are 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
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

Are 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
 Are 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

What pipes are carried through the bunkers how How are they protected ✓
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top platform

OILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons Ltd.
 Total Heating Surface of Boilers 8151 ft Is Forced Draft fitted yes No. and Description of Boilers 3 Single ended Cyl. Mult.

Working Pressure 180 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 20-9-21 No. of Certificate 6241
 Can each boiler be worked separately yes Area of fire grate in each boiler 65 ft No. and Description of Safety Valves to

each boiler 2 direct spring loaded Area of each valve 12.56 ft Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 15' - 6 1/2" Length 12' - 0" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 28 1/2 / 32 1/2 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR Lap.
 Long. seams Y.R. ABS. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 5/8" Lap of plates or width of butt straps 18 5/8"

Per centages of strength of longitudinal joint 86.2 Working pressure of shell by rules 180.5 lbs. Size of manhole in shell 12" x 16"
 Size of compensating ring 32" x 36" x 1 1/8" No. and Description of Furnaces in each boiler 3 Dighton Material Steel Outside diameter 46 13/16"

Length of plain part top Thickness of plates crown 2 1/2" bottom 2 1/2" Description of longitudinal joint Weld. No. of strengthening rings ✓
 Working pressure of furnace by the rules 205 lbs. Combustion chamber plates: Material Steel Thickness: Sides 19/32" Back 19/32" Top 7/8" Bottom 13/16"

Pitch of stays to ditto: Sides 8" x 8" Back 8 1/8" x 8" Top 9 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lbs.
 Material of stays Steel Area at smallest part 1.43 ft Area supported by each stay 41.25 ft Working pressure by rules 212 lbs. End plates in steam space:

Material Steel Thickness 1 1/8" Pitch of stays 20" x 16" How are stays secured Anchor & nut Working pressure by rules 188 lbs. Material of stays Steel
 Area at smallest part 6.1 ft Area supported by each stay 320 ft Working pressure by rules 194 lbs. Material of Front plates at bottom Steel

Thickness 13/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 15 3/4" Working pressure of plate by rules 180 lbs.
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 1/16" Material of tube plates Steel Thickness: Front 13/16" Back 3/4" Mean pitch of stays 11 1/4" x 4 1/8"

Pitch across wide water spaces 13 1/2" Working pressures by rules 189 lbs. Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 8" x 13 1/4" Length as per rule 2' - 6 3/4" Distance apart 9 1/2" Number and pitch of stays in each 3 @ 4 1/2"

Working pressure by rules 192 lbs. Steam dome: description of joint to shell ✓ % 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 ✓ Date of Approval of Plan ✓ Tested by Hydraulic Pressure to ✓

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓ Lloyd's Register
 Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓ Foundation

W1153-0228

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Screw shaft and propeller, 2 Yps and bolts + nuts: 2 Bottom end bolts + nuts: 2 main bearing bolts + nuts: 1 set of Coupling bolts + nuts: 12 condenser tubes: 20 boiler tubes: 1 set of feed pump valves: 1 set of B. dge. pump valves: 2 safety valve springs: 1 main and 1 Auxiliary feed check valve: 1 pair of Bottom end bushes: 1 Eccentric strap: Ring + spring for S.P. piston: 1 set of Gilder buckets: 1/2 set of Air pump valves: Assorted bolts + nuts: Shaft + Rod. steel

For and on behalf of

RICHARDSON, WESTGARTH & Co. Ltd.

The foregoing is a correct description,

William. J. J.

Manufacturer.

Dates of Survey while building: During progress of work in shops - - - 1910 Nov. 1. 22. 25 Dec. 3. 7. 9. 13. 16. 20. 23. 31. 1911 Jan. 7. 11. 12. 20. 24. Feb. 9. 15. 17. 23. 28. Mar. 3. 9. 16. 21. 22. 30. Apr. 1. 4. 6. 8. 14. 15. 21. 27. 29. May 2. 10. 11. 19. 23. Jun. 1. 9. 14. 17. 22. 27. Jul. 1. 7. 12. 14. 22. 26. Aug. 4. 8. 25. 26. 29. Sept. 1. 2. 6. 9. 12. 13. 14. 20. 23. 27. 28. Oct. 6. 10. 12. 13. 14. 20. 24. 31. Nov. 3. 8. 10. 11. 14. 15. 16. 17. 18. 21. 22. 28. Dec. 1. 6. 13. 20. 1912 Jan. 5. 23. Feb. 7. 9. 17. Mar. 8. Total No. of visits 101.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 1. 9. 21 Slides 6. 9. 21 Covers 6. 9. 21 Pistons 6. 9. 21 Rods 9. 9. 21 Connecting rods 26. 4. 21 Crank shaft 11. 5. 21 Thrust shaft 9. 9. 21 Tunnel shafts 14. 4. 21 Screw shaft 21. 9. 21 Propeller 10. 5. 21 Stern tube 23. 5. 21 Steam pipes tested 21. 10. 21 Engine and boiler seatings 6. 10. 21 Engines holding down bolts 3. 11. 21 Completion of pumping arrangements 14. 2. 22 Boilers fixed 3. 11. 21 Engines tried under steam 1. 12. 21 Completion of fitting sea connections 24. 9. 21 Stern tube 6. 10. 21 Screw shaft and propeller 6. 10. 21 Main boiler safety valves adjusted 1. 12. 21 Thickness of adjusting washers Port boiler 24 3/32 SV 7/16 Anti boiler 24 1/16 SV 3/8 Main boiler 24 1/16 SV 7/16 Material of Crank shaft Ingot steel Identification Mark on Do. 6258 RR. Material of Thrust shaft Ingot steel Identification Mark on Do. 5595 N. W.C. Material of Tunnel shafts Ingot steel Identification Marks on Do. 6395 N. W.C. Material of Screw shafts Iron Identification Marks on Do. 6283 RBS Material of Steam Pipes Steel Test pressure 350 lbs

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

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

Is this machinery duplicate of a previous case No If so, state name of vessel

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

The machinery of this vessel has been built under Special Survey: the workmanship and materials are good. It has been efficiently fitted on board and proved satisfactory under working conditions.

The vessel is eligible in my opinion to have the notations of L.M.C. 3.22 and Fitted for oil fuel 3.22 F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. - 3.22. F.D. C.L.

Fitted for Oil Fuel, 3.22, F.P. above 150°F.

Ans. L.J. 30/3/22.

The amount of Entry Fee ... £ 6 : 0 Special ... £ 101 : 18 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ When applied for. 4. 7. 1922. When received. 22. 3. 1922. 5. 4. 1922.

Wm. Cowie Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. APR. 4 1922

Assigned

+ L.M.C. 3.22 F.D. C.L.

Fitted for oil fuel 3.22 F.P. above 150°F.



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