

REPORT ON MACHINERY.

No. 74821

Received at London Office

SAT. OCT. 8 1921

Writing Report

19

When handed in at Local Office

7.10.21 Port of

NEWCASTLE-ON-TYNE

Survey held at Newcastle-on-Tyne

Date, First Survey 30 April 1920 Last Survey 20 Sept 1921

(Number of Visits 80)

on the Steel Ss. EL 050

Gross 7325

Net 4620

When built 1921

Built at Newcastle

By whom built Armstrong, Whitworth & Co. Ltd

when made 1921

made at Newcastle

By whom made Armstrong, Whitworth & Co. Ltd

when made 1921

made at Newcastle

By whom made Armstrong, Whitworth & Co. Ltd

when made 1921

rated Horse Power

Owners Lobito Oil Fields Ltd.

Port belonging to London

Horse Power as per Section 28 678

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Cylinders 29", 48", 81"

Length of Stroke 54"

Revs. per minute 73

Dia. of Screw shaft

as per rule 16.83

Material of Steel

screw shaft fitted with a continuous liner the whole length of the stern tube no liner

Is the after end of the liner made water tight

propeller boss If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

are fitted, is the shaft lapped or protected between the liners

Length of stern bush 70"

Tunnel shaft

as per rule 14.6"

Dia. of Crank shaft journals

as per rule 15.33"

Dia. of Crank pin

as per rule 15.34"

Dia. of thrust shaft under

15 1/4" Dia. of screw 19'-0" Pitch of Screw 17'-9" No. of Blades 4 State whether moveable Yes Total surface 114 sq

Feed pumps 2 Diameter of ditto 4 1/2" Stroke 27"

Can one be overhauled while the other is at work Yes

Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 27"

Can one be overhauled while the other is at work Yes

Donkey Engines 5

Sizes of Pumps

General Service 7 1/2" x 4 1/2" x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps

gine Room Three - 3 1/2" Duplex Ballast 10" x 12" x 12" In Holds, &c. none

Bilge Injections / sizes 12" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 9"

the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the shcoes on Engine room bulkheads always accessible none

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

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 both

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

pipes are carried through the bunkers none How are they protected

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

ERS, &c.—(Letter for record r) Manufacturers of Steel J. Spence & Sons Ltd.

Heating Surface of Boilers 10065 sq Is Forced Draft fitted Yes No. and Description of Boilers 3 J.E. Multitubular

ing Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Date of test 13.8.21 No. of Certificate 9589

each boiler be worked separately Yes Area of fire grate in each boiler 82 sq No. and Description of Safety Valves to

boiler 2 Spring-loaded Area of each valve 14-18 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

distance between boilers or uptakes and bunkers or woodwork 8'-0" Mean dia. of boilers 17'-0" Length 12'-0" Material of shell plates Steel

ess 1 1/2" Range of tensile strength 20/34 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. lap

seams T.R. D.B.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 9 1/4" Lap of plates or width of butt straps 20"

antages of strength of longitudinal joint rivets 85.9 Working pressure of shell by rules 186 Size of manhole in shell 20" x 16"

compensating ring 20 1/4" x 1 1/8" No. and Description of Furnaces in each boiler 4 Deighton Material Steel Outside diameter 45 1/4"

of plain part top Thickness of plates crown 17" Description of longitudinal joint weld No. of strengthening rings

bottom Thickness of plates bottom 32" Description of longitudinal joint weld No. of strengthening rings

ing pressure of furnace by the rules 180 Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 1/16" Top 9/16" Bottom 1"

of stays to ditto: Sides 8" x 7 1/2" Back 10 1/8" x 9" Top 8" x 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

ial of stays Iron Area at smallest part 1.45 sq Area supported by each stay 60 sq Working pressure by rules 209 End plates in steam space:

ial Steel Thickness 1 5/16" Pitch of stays 24 1/4" x 18" How are stays secured D.N. riv. Working pressure by rules 197 Material of stays Steel

at smallest part 7.063 Area supported by each stay 4.75 sq Working pressure by rules 208 Material of Front plates at bottom Steel

ess 13/16" Material of Lower back plate Steel Thickness 29/32" Greatest pitch of stays 15" Working pressure of plate by rules 204

ter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates Steel Thickness: Front 13/16" Back 23/32" Mean pitch of stays 11 1/4"

across wide water spaces 17 1/4" Working pressures by rules 189 Girders to Chamber tops: Material Steel Depth and

ess of girder at centre 8 1/4" x 1 1/2" Length as per rule 32 3/4" Distance apart 8" Number and pitch of stays in each 3-7 1/2"

ing pressure by rules 183 Steam dome: description of joint to shell none % of strength of joint

ter 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

REHEATER. Type none Date of Approval of Plan Tested by Hydraulic Pressure to

f Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

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

Lloyd's Register
W418-0019

16849
IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— One C.I. propeller. Screw shaft with continuous liner — 4 main Bearing Bolts — 2 doz. Junk ring bolts — 2 doz. Junk ring bolts — set of rings and springs for each piston & piston valve — one air pump rod — set of air pump valves — 2 doz. Condenser tubes — 50 ferrules — 3 sets of main and auxiliary feed check valves, 3 sets safety valve springs — 2 doz. stay tubes for Boilers — set of valves, spindles & springs for O.P. pumps — set of valves, spindles & springs for Ballast pumps — Feed & Bilge pumps' valves — Bolts, nuts and assorted iron.

The foregoing is a correct description,

SIR W. & A. ARMSTRONG, WHITWORTH & CO. LIMITED.

Manufacturer.

Dates of Survey while building
During progress of work in shops — 1920
During erection on board vessel — 1920
Total No. of visits 80.

Is the approved plan of main boiler forwarded herewith?

Dates of Examination of principal parts—Cylinders 14.7.21 Slides 8.8.21 Covers 18.8.21 Pistons 19.7.21 Rods 18.7.21
Connecting rods 26.7.21 Crank shaft 9.6.21 Thrust shaft 18.11.20 Tunnel shafts 15.7.21 Screw shaft 15.7.21 Propeller 19.7.21
Stern tube 13.4.21 Steam pipes tested 5.9.21 Engine and boiler seatings 19.8.21 Engines holding down bolts 5.9.21
Completion of pumping arrangements 13.9.21 Boilers fixed 5.9.21 Engines tried under steam 13.9.21
Completion of fitting sea connections 5.7.21 Stern tube 5.7.21 Screw shaft and propeller 5.7.21
Main boiler safety valves adjusted 13.9.21 Thickness of adjusting washers For Boilers F 7/16" A 7/16" For Pistons F 3/8" A 3/8" For Rods F 1/2" A 1/2"
Material of Crank shaft S.M. Steel Identification Mark on Do. C.L.A. 6.21 Material of Thrust shaft Steel Identification Mark on Do. T
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. M
Material of Steam Pipes S.D. Steel 6" 4 No 3. Swk Test pressure 540 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 was constructed under special survey. The workmanship and materials are sound and good. The Boilers were tested by hydraulic pressure and their safety valves adjusted under steam. The main and auxiliary machinery were tried out under working conditions with satisfactory results. An oil fuel burning plant on the Ballast-Holder System has been efficiently installed. The requirements of Section 49 of the Rules have been complied with. In an opinion this vessel is eligible to be classed in the Society's Register Book with notation + L.M.C. 9.20 Fitted for oil fuel 9.20. F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.21 F.P.

Fitted for oil fuel 9.21. F.P. above 150°F.

Recd 17/10/21

The amount of Entry Fee ... £ 6 : -
Special ... £ 108 : 18
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :

When applied for.

When received.

Committee's Minute

Assigned

MACHINERY CERT
WRITTEN

+ L.M.C. 9.21. F.P.
Fitted for oil fuel 9.21.
F.P. above 150°F.

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