

REPORT ON MACHINERY.

No. 28425

Received at London Office SAT. SEP. 30 1922

Date of writing Report 19 When handed in at Local Office 29 SEP 1922 Port of SUNDERLAND.

No. in Survey held at SUNDERLAND. Date, First Survey 18th April 1921 Last Survey 21st Sept 1922

Reg. Book. 80710 on the new steel S/S "STAKESBY"

Master Built at Sunderland By whom built J.L. Thompson & Sons Ltd (N^o 544) When built 1922

Engines made at Sunderland By whom made J. Dickinson & Sons Ltd (N^o 863) when made 1922

Boilers made at Sunderland By whom made J. Dickinson & Sons Ltd (N^o 863) when made 1922

Registered Horse Power Owners Rowland & Marwood's SS Co Ltd. Port belonging to Whitby

Nom. Horse Power as per Section 28 357 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 25" 41" 68" Length of Stroke 45 Revs. per minute 70 Dia. of Screw shaft as per rule 14.48" Material of screw shaft as fitted 14 3/4" J. Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners Is the after end of the liner made water tight

in the 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

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 5'-0"

Dia. of Tunnel shaft as per rule 12.46" as fitted 12 3/4" Dia. of Crank shaft journals as per rule 13.08" as fitted 13 1/4" Dia. of Crank pin 13 1/4" Size of Crank webs 8 1/2" 27 1/2" Dia. of thrust shaft under

collars 13 1/2" Dia. of screw 16'-6" Pitch of Screw 15'-6" No. of Blades 4 State whether moveable no Total surface 79.50 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 1 @ 9 1/2" 10" 2 @ 7 1/2" 4 5" 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 4 @ 3 1/2" In Holds, &c. N^o 1 hold, - 2 @ 3 1/2". N^o 2 hold, - 2 @ 3 1/2".

N^o 3 hold, - 2 @ 3 1/2". N^o 4 hold, - 2 @ 3 1/2". Tunnel well, - 1 @ 3 1/2".

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump b. p. Is a separate Donkey Suction fitted in Engine room & size yes, 4"

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 none

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 forward hold suction How are they protected Under wood casing

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

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel John Spencers & Sons Ltd 3SB.

Total Heating Surface of Boilers 57780 sq ft Is Forced Draft fitted no No. and Description of Boilers three single ended marine

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 30-8-22 No. of Certificate 3808

Can each boiler be worked separately yes Area of fire grate in each boiler 540 sq ft No. and Description of Safety Valves to

each boiler two direct spring Area of each valve 8.30" Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-0" Mean dia. of boilers 14'-6" Length 10'-6" Material of shell plates steel

Thickness 1 3/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR

long. seams WBS. TR Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 3/4" End of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 100 Working pressure of shell by rules 181 Size of manhole in shell 16" x 12"

Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 cf 3 Beighton Material steel Outside diameter 44"

Length of plain part top 11" bottom 13 1/2" Thickness of plates crown 11" bottom 13 1/2" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 188 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"

Pitch of stays to ditto: Sides 9"x10" Back 9"x10" Top 8 1/2"x10" If stays are fitted with nuts or riveted heads nuts in use Working pressure by rules 182

Material of stays steel Area at smallest part 2.030" Area supported by each stay 900" Working pressure by rules 201 End plates in steam space:

Material steel Thickness 1 1/8" Pitch of stays 19"x17" How are stays secured DN Working pressure by rules 180 Material of stays steel

Area at smallest part 5.570" Area supported by each stay 285 Working pressure by rules 189 Material of Front plates at bottom steel

Thickness 3 1/2" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 10"x13 1/8" Working pressure of plate by rules 181

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates steel Thickness: Front 3 1/2" Back 7/8" Mean pitch of stays 9"x9"

Pitch across wide water spaces 13 1/4" Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 2 @ 6 1/2" x 1 Length as per rule 29 15/16" Distance apart 8 1/2" Number and pitch of stays in each 2-10"

Working pressure by rules 182 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

UPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

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

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

005524-005536-0193



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, one set of feed and bridge pump valves, iron and bolts of various sizes, one screw shaft and one propeller.*

The foregoing is a correct description

W. K. Robinson

Manufacturer. MANAGER

Dates of Survey while building { During progress of work in shops -- } *1921. Apr. 18, 20. May 7, 17, 30. Apr. 5, 19. May 9, 12, 16, 22, 30. July 17, 21, 24, 25, 26, 27. Aug. 15.*
{ During erection on board vessel -- } *23, 25, 29. Sep. 4, 7, 9, 12, 13, 14, 15, 20, 21.*
Total No. of visits *32*

Is the approved plan of main boiler forwarded herewith *yes*
" " " donkey " " "

Dates of Examination of principal parts—Cylinders *26-7-22* Slides *15-8-22* Covers *15-8-22* Pistons *26-7-22* Rods *27-7-22*
Connecting rods *17-7-22* Crank shaft *21-7-22* Thrust shaft *21-7-22* Tunnel shafts *21-7-22* Screw shaft *21-7-22* Propeller *25-8-22*
Stern tube *17-7-22* Steam pipes tested *7-9-22* Engine and boiler seatings *26-7-22* Engines holding down bolts *14-9-22*
Completion of pumping arrangements *15-9-22* Boilers fixed *14-9-22* Engines tried under steam *15-9-22*
Completion of fitting sea connections *18-4-21* Stern tube *26-7-22* Screw shaft and propeller *6-9-22*
Main boiler safety valves adjusted *15-9-22* Thickness of adjusting washers *low. 1/4", P 1/2", S 2"; bottom. P 1/2", S 1/4"; star. 1/4", P 1/2", S 1/2"*

Material of Crank shaft *J. steel* Identification Mark on Do. *5622* Material of Thrust shaft *J. steel* Identification Mark on Do. *6321*
Material of Tunnel shafts *J. steel* Identification Marks on Do. *6321* Material of Screw shafts *J. steel* Identification Marks on Do. *6321, 141*
Material of Steam Pipes *Solid drawn copper* Test pressure *400 lb per 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 *no* If so, state name of vessel

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

*The materials and workmanship are good.
The machinery has been constructed under special survey as is eligible in my opinion for classification and the record + LMC 9, 22.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 9, 22.

W. K. Robinson 3/9/22

S. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ *5* : : When applied for.
Special ... £ *78* : *11* : *23rd Sep 1922*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : *11/10/22*

Committee's Minute *FRI. 6 OCT. 1922*
Assigned *+ Amb. 9.22.*

SUNDERLAND.
Certificate (if required) to be sent to
The Surveyors are requested not to write on below the space for Committee's Minute.

MACHINERY DEPT.
WRIGHT

