

Rpt. 4.

REPORT ON MACHINERY

SUNDERLAND RPT. No. 27160

No. 70599

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

NEWCASTLE-ON-TYNE

No. in
Reg. Book.Survey held at Newcastle-on-Tyne
on the SCREW STEAMER "HOPELYN"

Date, First Survey

24 Nov 1917

Last Survey

10 Jan 1918

(Number of Vessels)

2348

Gross 1301

Net 1301

When built 1918

Master

Built at Sunderland

By whom built

Swan Hunter & Wigham RichardsonEngines made at Newcastle-on-Tyne

By whom made

Swan Hunter & Wigham Richardson

When made 1918

Boilers made at Newcastle-on-Tyne

By whom made

Swan Hunter & Wigham Richardson

When made 1918

Registered Horse Power

Owners Hopkinson Shipping Co.

Port belonging to

Newcastle

Nom. Horse Power as per Section 28

249

Is Refrigerating

Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders 22" 35" 58"Length of Stroke 39"Revs. per minute 72

Dia. of Screw shaft

as per rule 12"Material of Steel

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

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

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

Dia. of Tunnel shaft 10 1/2" Dia. of Crank shaft journals 11 3/4" Dia. of Crank pin 11 3/4" Size of Crank webs 14 1/2" Dia. of thrust shaft undercollars 11 5/8" Dia. of screw 15 0" Pitch of Screw 16 0" No. of Blades 4 State whether moveable No Total surface 46 sq. ft.No. of Feed pumps 2 Diameter of ditto 3" Stroke 22" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 22" Can one be overhauled while the other is at work YesNo. of Donkey Engines Three Sizes of Pumps 8" x 9" x 8" 6" x 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Three: one 3" dia. two 2 1/2" dia. In Holds, &c. No 1 HOLD: one 2 1/2" dia. No 2 HOLD: threeNo. of Bilge Injections 1 sizes 1 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3"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 noneAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers forward hold suction How are they protected wood casingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections 11-12-17 of Stern Tube 11-12-17 Screw shaft and Propeller 8/1/18Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platformBOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Samson & Sons Ltd.Total Heating Surface of Boilers 4124 sq. ft. Is Forced Draft fitted No No. and Description of Boilers Two: 4' x 10' 6" SingleWorking Pressure 180 lb. Tested by hydraulic pressure to 360 lb. Date of test 23/11/17 No. of Certificate 9032Can each boiler be worked separately Yes Area of fire grate in each boiler 65 sq. ft. No. and Description of Safety Valves toeach boiler 2: Direct Spring Area of each valve 4.06 sq. in. Pressure to which they are adjusted 185 lb. Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 4' 0" Mean dia. of boilers 15' 0" Length 10' 6" Material of shell plates SteelThickness 1 1/2" Range of tensile strength 29 to 33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap Singlelong. seams ONS: Single Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 5 1/2" 4 1/2" Lap of plates or width of butt straps 1 1/2"Per centages of strength of longitudinal joint 87.3 Working pressure of shell by rules 180 lb. Size of manhole in shell 16" x 12"Size of compensating ring 38 1/2" x 34 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3: Righting Material Steel Outside diameter 48 1/2"Length of plain part 6' 11 1/2" Thickness of plates 1 1/2" Description of longitudinal joint weld No. of strengthening rings noneWorking pressure of furnace by the rules 180 lb. Combustion chamber plates: Material Steel Thickness: Sides 3/2" Back 3/2" Top 3/2" Bottom 3/2"Pitch of stays to ditto: Sides 9" x 9" Back 9" x 9" Top 9" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 183 lb.Material of stays Steel Diameter at smallest part 2.05" Area supported by each stay 81 sq. in. Working pressure by rules 225 lb. End plates in steam space:Material Steel Thickness 1 1/2" Pitch of stays 24" x 20" How are stays secured by nuts Working pressure by rules 181 lb. Material of stays SteelDiameter at smallest part 4 1/2" Area supported by each stay 425 sq. in. Working pressure by rules 182 lb. Material of Front plates at bottom SteelThickness 3/2" Material of Lower back plate Steel Thickness 3/2" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 214 lb.Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 3/2" Back 1 1/2" Mean pitch of stays 11 1/2"Pitch across wide water spaces 14 1/2" Working pressures by rules 189 lb. 189 lb. Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 9 1/2" x 1 1/2" Length as per rule 3 1/2" Distance apart 9" Number and pitch of stays in each 2: 9"Working pressure by rules 183 lb. Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler workedseparately Yes Diameter 14 1/2" Length 14 1/2" Thickness of shell plates 3/2" Material Steel Description of longitudinal joint weld Diam. of rivetholes 1 1/8" Pitch of rivets 5 1/2" Working pressure of shell by rules 183 lb. Diameter of flue 14 1/2" Material of flue plates Steel Thickness 3/2"If stiffened with rings Yes Distance between rings 14 1/2" Working pressure by rules 183 lb. End plates: Thickness 3/2" How stayed by staysWorking pressure of end plates 183 lb. Area of safety valves to superheater 14 1/2" x 14 1/2" Are they fitted with easing gear YesLloyd's Register
Foundation

