

REPORT ON MACHINERY.

Std No. 28775

Received at London Office
SUNDERLAND.

WED. MAR. 26 1924

Date of writing Report 19 When handed in at Local Office 25 MAR 1924 Port of SUNDERLAND.

No. in Survey held at 36030 on the new steel S/S "USKBRIDGE". Date, First Survey 10th April 23 Last Survey 21-3-24 (Number of Visits 45)

Reg. Book. 36030 on the new steel S/S "USKBRIDGE". Tons Gross 2530 Net 1515

Master Built at Burntisland By whom built Burntisland SBC Co S/S 1921 When built 1924

Engines made at Sunderland By whom made N.E. Marine Eng Co L^o (No 2530) when made 1924

Boilers made at Sunderland By whom made N.E. Marine Eng Co L^o (No 2530) when made 1924

Registered Horse Power Owners H. & S. Cold (R. W. Jones & Co. Mgrs) Port belonging to Newport (Mon)

Nom. Horse Power as per Section 28 278 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 22"-36"-60" Length of Stroke 39" Revs. per minute 75 Dia. of Screw shaft as per rule 12.5" Material of screw shaft 19. 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 yes If the liner is in more than one length are the joints burned no 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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 4'-2"

Dia. of Tunnel shaft as per rule 10.86" as fitted 11" Dia. of Crank shaft journals as per rule 11.4" as fitted 11.2" Dia. of Crank pin 11.2" Size of Crank webs 16" x 7 3/16" Dia. of thrust shaft under collars 11.2" Dia. of screw 15.2" Pitch of Screw 14'-6" No. of Blades 4 State whether movable no Total surface 75 1/2 sq ft

No. of Feed pumps 2 Diameter of ditto 3" Stroke 21" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 2 @ 6 1/4 x 6, 1 @ 8 1/2 x 11 x 10 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 2 1/2" In Holds, &c. No 1 hold - 2 @ 2 1/2", No 2 hold - 2 @ 2 1/2"

No 3 hold - 3 @ 3" Tunnel well - 2 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 both

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 none 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

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel John Spencer & Sons Ltd.

Total Heating Surface of Boilers 4762 sq ft Forced Draft fitted no No. and Description of Boilers Two single ended marine

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 21-1-24 No. of Certificate 3860

Can each boiler be worked separately yes Area of fire grate in each boiler 61 sq ft No. and Description of Safety Valves to each boiler two direct spring Area of each valve 8.29 sq ft Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boiler uptakes and bunkers or woodwork 1'-6" Mean dia. of boilers 15'-6" Length 10'-9 1/16" Material of shell plates steel

Thickness 1 1/4" Range of tensile strength 29-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams B.R. long. seams B.R.S.T.R. Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 9" Lap of plates or width of butt straps 1'-7 1/8"

Per centages of strength of longitudinal joint rivets 87.5 plate 85.77 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Deighton Material steel Outside diameter 3'-8 3/8"

Length of plain part top bottom Thickness of plates crown bottom 3 9/16" Description of longitudinal joint welded No. of strengthening rings —

Working pressure of furnace by the rules 183 Combustion chamber plates: Material steel Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 12" x 9 3/4" Back 11 1/2" x 10 1/2" Top 11 1/2" x 9 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Area at smallest part 2.360" Area supported by each stay 117.80" Working pressure by rules 180 End plates in steam space: Material steel Thickness 1 5/16" Pitch of stays 23" x 21 1/2" How are stays secured W.N. & W Working pressure by rules 181 Material of stays steel

Area at smallest part 7.980" Area supported by each stay 494.50" Working pressure by rules 180 Material of Front plates at bottom steel

Thickness 1/8" Material of Lower back plate steel Thickness 1/8" Greatest pitch of stays 14 3/4" x 10 1/2" Working pressure of plate by rules 190

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 5/8" Material of tube plates steel Thickness: Front 1/8" Back 3/4" Mean pitch of stays 10.5"

Pitch across wide water spaces 14 1/2" Working pressures by rules 184 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 208 1/2" x 7/8" Length as per rule 2'-7 1/2" Distance apart 11 1/2" Number and pitch of stays in each 2 @ 9 3/4"

Working pressure by rules 185 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



IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

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 bilge pump valves. iron and bolts of various sizes.*

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING COY. LTD.

W. A. M. M. M.

Manufacturer.

Dates of Survey while building: During progress of work in shops - *1923. Apr. 12, 27. May. 25. June. 6, 11, 19. July. 5, 20. Aug. 1, 15, 16, 21, 29. Sep. 7, 13. Oct. 17. Nov. 6, 7, 9.*
During erection on board vessel - *19. 21, 28. Dec. 4, 5, 6, 12, 13, 14, 17, 19. 1924. Jan. 11, 18, 21, 29. Feb. 22, 26. Mar. 6, 11, 14, 17, 18, 22.*
Total No. of visits *45* *Leith 27.3.24 16.4.24 29.5.24 9.6.24 (4 visits)*

Dates of Examination of principal parts - Cylinders *17-11-23* Slides *19-11-23* Covers *9-11-23* Pistons *19-11-23* Rods *17-10-23*
Connecting rods *4-12-23* Crank shaft *17-10-23* Thrust shaft *17-10-23* Tunnel shafts *17-10-23* Screw shaft *26-2-24* Propeller *21-11-23*
Stern tube *29-1-24* Steam pipes tested *11-3-24* Engine and boiler seatings *2-1-24* Engines holding down bolts *17-3-24*
Completion of pumping arrangements *22-3-24* Boilers fixed *11-3-24* Engines tried under steam *22-3-24*
Completion of fitting sea connections *20-2-24* Stern tube *6-3-24* Screw shaft and propeller *6-3-24*
Main boiler safety valves adjusted *22-3-24* Thickness of adjusting washers *Port boiler - F 1 1/2". A 1 1/2". Star boiler - bolt 1 1/2"*

Material of Crank shaft *I. steel* Identification Mark on Do. *LLOYD'S NO 6511 L.C.D. 17-10-23* Material of Thrust shaft *I. steel* Identification Mark on Do. *LLOYD'S NO 6511 L.C.D. 17-10-23*
Material of Tunnel shafts *I. steel* Identification Marks on Do. *LLOYD'S NO 6511 L.C.D. 17-10-23* Material of Screw shafts *I. steel* Identification Marks on Do. *LLOYD'S NO 6511 L.C.D. 17-10-23*
Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs 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 *yes* If so, state name of vessel *"USKHAVEN" (Sld Rpt. No 2859)*

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

To complete the survey the shaft tunnel door gearing requires to be fitted and the spare gear to be checked. The vessel has returned to Burntisland for completion. Leith Surveyors advised.

The materials and workmanship are good. The machinery has been constructed under special survey and is eligible in our opinion for classification and the record + LMC 6.24

The machinery of this vessel has been securely fitted on board & tested under full working conditions & found satisfactory. The shaft tunnel door gearing fitted & found satisfactory. Spare gear checked.

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.24. CL.

S. Davis & R. J. Asthore
Engineer Surveyor to Lloyd's Register of Shipping.

FRI 22 AUG 1924

The amount of Entry Fee ... £ 4 : : When applied for,
Special ... £ 66 : 14 : 25 MAR 1924
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 22-4-1924

Committee's Minute FRI 20 JUN 1924
Assigned + L.M.C. 6.24 C.L.



SUNDERLAND. Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute