

# REPORT ON MACHINERY

No. 29078

Received at London Office

FRI. 21. JAN. 1916

Date of writing Report 20-1-16 When handed in at Local Office 20-1-16 Port of Hull

No. in Survey held at Hull Date, First Survey 12-3-15 Last Survey 7-1-1916

Reg. Book. 81 on the Steam Trawler "Sea Monarch" (Number of Voids 48)

Master Built at Beverley By whom built Cook, Welton & Gemmell Tons { Gross 329 Net 138 When built 1915

Engines made at Hull By whom made Amos & Smith (No. 2680) when made 1915

Boilers made at Hull By whom made Amos & Smith when made 1915

Registered Horse Power Owners Number Steam Trawling Co. Port belonging to Hull

Nom. Horse Power as per Section 28 92 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 13" x 22 1/2" x 37" Length of Stroke 26" Revs. per minute 108 Dia. of Screw shaft as per rule 7.84" Material of Iron as fitted 8.25" screw shaft

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 3'-0"

Dia. of Tunnel shaft as per rule 7.02" Dia. of Crank shaft journals as per rule 7.37" Dia. of Crank pin 7 1/2" Size of Crank webs 14 3/4" x 4 3/4" Dia. of thrust shaft under collars 7 1/2" Dia. of screw 9'-6" Pitch of Screw 11'-6" No. of Blades 4 State whether moceable no Total surface 33 sq ft

No. of Feed pumps 1 Diameter of ditto 2 7/8" Stroke 12" Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 2 7/8" Stroke 12" Can one be overhauled while the other is at work

No. of Donkey Engines 1 1/2 ejecta Sizes of Pumps 6 1/4" x 4 3/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room two 2", one forward & one aft. In Holds, &c. Six 2", one to spare fish room, one to slush well in same, one to intermediate slushwell, one to main fishroom, one to slushwell in same, one to fore hold

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2" ejecta

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

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 wood casings

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

Dates of examination of completion of fitting of Sea Connections 20-5-15 of Stern Tube 20-5-15 Screw shaft and Propeller 20-5-15

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel Steel Co. of Scotland

Total Heating Surface of Boilers 1557.5 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended main

Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 12-11-15 No. of Certificate 3111

Can each boiler be worked separately Area of fire grate in each boiler 47.5 sq ft No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7" Int. Mean dia. of boilers 13'-6" Length 10'-6" Material of shell plates S

Thickness 1 3/32" Range of tensile strength 28/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR. long. seams TRDBS Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/8" Lap of plates or width of butt straps 19 13/16"

Per centages of strength of longitudinal joint rivets 92.1 plates 84.6 Working pressure of shell by rules 201 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 40" x 30" x 1 3/32" No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3'-3 5/8"

Length of plain part top 73" bottom 67 1/2" Thickness of plates crown 1 13/16" bottom 1 1/16" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 214 Combustion chamber plates: Material S Thickness: Sides 11/16" Back 23/32" Top 11/16" Bottom 13/16"

Pitch of stays to ditto: Sides 9 1/2" x 8 1/2" Back 8 5/8" x 9" Top 8 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 201

Material of stays S Diameter at smallest part 2.0660 Area supported by each stay 80.750 Working pressure by rules 230 End plates in steam space

Material S Thickness 1 3/16" Pitch of stays 17 1/2" x 17" How are stays secured DN4W Working pressure by rules 224 Material of stays S

Diameter at smallest part 7.24 Area supported by each stay 297.50 Working pressure by rules 253 Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 15/16" Greatest pitch of stays 13 3/4" x 9" Working pressure of plate by rules 234

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

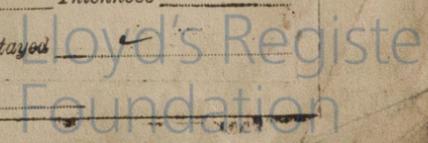
Pitch across wide water spaces 13 3/4" Working pressures by rules 203 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10" x 1 3/4" Length as per rule 2-10" Distance apart 9 1/2" Number and pitch of stays in each 3-8 1/2"

Working pressure by rules 226 Superheater or Steam chest; how connected to boiler Can the superheater, be shut off, and the boiler worked separately

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts; two bottom end bolts & nuts; two main bearing bolts & nuts; one set of coupling bolts & nuts; one set of feed, bilge, & air pump valves; one main & one donkey check valve; a quantity of bolts & nuts & iron of various sizes

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

J. Peckhamburg

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1915: - Mar 12, 18, 22, 26, 29 Apr 16, 20, 23 May 4, 12, 13, 17, 19, 20, 21, 27 Jun 4, 17, 20, 24, 25, 26, 27, 28, 29, 30, 31 Aug 6, 13, 20, 27 Sep 3, 13, 20, 25 Oct 5, 12, 29 Nov 5, 12, 19, 25, 26, 29 Dec 3, 14, 15 24, 1915: - Jan 3, 7. Total No. of visits 49. Is the approved plan of main boiler forwarded herewith yes.

Dates of Examination of principal parts - Cylinders 5-11-15 Slides 24-12-15 Covers 5-11-15 Pistons 24-12-15 Rods 5-11-15

Connecting rods 24-12-15 Crank shaft 25-11-15 Thrust shaft 25-11-15 Tunnel shafts 17-5-15 Screw shaft 17-5-15 Propeller 17-5-15

Stern tube 17-5-15 Steam pipes tested 15-12-16 Engine and boiler seatings 20-5-15 Engines holding down bolts 15-12-15

Completion of pumping arrangements 7-1-16 Boilers fixed 15-12-15 Engines tried under steam 22-12-15

Main boiler safety valves adjusted 22-12-15 Thickness of adjusting washers P 3/32 S 5/16

Material of Crank shaft steel Identification Mark on Do. 25-11-15 Material of Thrust shaft steel Identification Mark on Do. 25-11-15

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 17-5-15

Material of Steam Pipes S.D. Copper Test pressure 400 lbs per sq. in.

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 "Sea Sweeper".

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

has been constructed under special survey in accordance with the approved plans & the rules of this Society; the materials & workmanship are good; the boiler & steam pipes have been tested as above by hydraulic pressure, and found sound & good.

The machinery has been properly fitted & secured on board, and on completion tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation, which did not exceed 208 lbs.

In my opinion the vessel is eligible for the record + LMC 1, 16

It is submitted that this vessel is eligible for THE RECORD + LMC 1-16.

J.W.D.

P.F.G.

The amount of Entry Fee ... £ 1 : - : - When applied for, 20/11/16 Special ... £ 13 : 16 : - When received, 21/1/16 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ 2 : - : -

P. Fitzgerald, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute TUE 25 JAN 1916 + LMC 1, 16 Assigned

MACHINERY CERTIFICATE WRITTEN

