

## 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)  
 Tons Gross 329  
 Net 138  
 Master Built at Beverley By whom built Cook, Welton & Gemmell 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 22½" x 37" Length of Stroke 26" Revs. per minute 108 Dia. of Screw shaft as per rule 7.84" Material of 1st 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 7½" Size of Crank webs 14¾" x 4¾" Dia. of thrust shaft under  
 collars 7½" Dia. of screw 9-6" Pitch of Screw 11-6" No. of Blades 4 State whether moveable no Total surface 33 sq ft  
 No. of Feed pumps 1 Diameter of ditto 2½" Stroke 12" Can one be overhauled while the other is at work  
 No. of Bilge pumps 1 Diameter of ditto 2½" Stroke 12" Can one be overhauled while the other is at work  
 No. of Donkey Engines 1 1/2 ejecta Sizes of Pumps 6¼" x 4¾" 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 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. dia. of boilers 13-6" Length 10-6" Material of shell plates S  
 Thickness 1½" 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 1¼" Pitch of rivets 8½" Lap of plates or width of butt straps 19½"  
 Per centages of strength of longitudinal joint rivets 92.1 Working pressure of shell by rules 201 lbs Size of manhole in shell 16" x 12"  
 plates 84.6  
 Size of compensating ring 40" x 30" x 1½" No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3'-3½"  
 Length of plain part top 73" Thickness of plates crown 13" Description of longitudinal joint welded No. of strengthening rings  
 bottom 67½" bottom 16"  
 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 9½" x 8½" Back 8½" x 9" Top 8½" x 9½" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 201  
 Material of stays S Diameter at smallest part 2-0 6/16" 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 17½" 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 13¾" x 9" Working pressure of plate by rules 234  
 Diameter of tubes 3½" Pitch of tubes 2" x 4¾" Material of tube plates S Thickness: Front 1" Back 2/8" Mean pitch of stays 9½" x 9¾"  
 Pitch across wide water spaces 13¾" Working pressures by rules 203 Girders to Chamber tops: Material S Depth and  
 thickness of girder at centre 10" x 1¾" Length as per rule 2-10 Distance apart 9½" Number and pitch of stays in each 3-8½"  
 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. Bachenburg*

*Manufacturer.*

Dates of Survey while building	During progress of work in shops - -	1915: Mar. 12, 18, 22, 26, 29 Apr. 16, 30, 23 May 4, 12, 13, 17, 19, 20, 21, 27 Jun. 4, 17, 26 Jul.
	During erection on board vessel - -	9, 14, 21, 28, 30 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
	Total No. of visits	1915: Jan. 3, 7. 49

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " ✓

Is the approved plan of <sup>the</sup> main boiler forwarded herewith

“ “ “ donkey ” ”

*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 25-11-15 ✓ 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 32 S 16 1618 P

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

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron. Identification Marks on Do. 175-1

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. Yes

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

amount of labor & the rules of this Society; the materials & workmanship

1. The 1000 specimens have been tested as above by

are good, the other same / /

101 111 129 and

hydraulic pressure, and found some fine

The machinery has been properly filled & secured.

completion tried under steam & found satisfactory. The safety valve

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

87

11-1361-16

THE RECORD FILM CO. INC.

4.9

John. 2/1/11

The amount of Entry Fee ... £ 1 : - : - When applied for, 29. 17/1/16

Special ... £ 13 : 16 : - 10/1/1916 P. Fitzgerald.

Donkey Boiler No. 101	When received, 10/1/1918	Engineer, J. H. Taylor
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Travelling Expenses (Daily) £ ..... 2/6

~~Committee's Minute TUE. 25. JAN. 1916~~

Assigned + Lm 6.1.10

MACHINERY CERTIFICATE

