

REPORT ON MACHINERY.

No. 25285

Received at London Office 11.1912

Date of writing Report July 24 1912. When handed in at Local Office 31.7.12 Port of Hull.
 Date, First Survey Feb. 1st Last Survey July 1912
 (Number of Visits 37) Tons { Gross 342 Net 191
 in Survey held at Hull.
 on the S/Trawler PAYLOVA
 Built at Beverly By whom built Brook. Weller & Co. when built 1912
 Engines made at Hull. By whom made Amos Smith & Co. when made 5
 Boilers made at Hull. By whom made Amos Smith & Co. when made 5
 Registered Horse Power - Owners South Western Ste. Fishing & S. Co. Port belonging to Grimsby
 Nom. Horse Power as per Section 28 90. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Inverted triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13.22 1/2 - 37 Length of Stroke 24 Revs. per minute 206 Dia. of Screw shaft 7.7 Material of screw shaft Iron
 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 Yes.
 If the liner is in more than one length are the joints burned Yes. 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 40.
 Dia. of Tunnel shaft 6.82 as per rule. 7.2 as fitted. Dia. of Crank shaft journals 7.6 as per rule. 7.3 as fitted. Dia. of Crank pin 7.3 Size of Crank webs 15.2 1/2 Dia. of thrust shaft under rollers 7.3 Dia. of screw 9.6 Pitch of Screw 11.2 No. of Blades 4 State whether moveable No Total surface 33.7
 No. of Feed pumps one Diameter of ditto 3 Stroke 13 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps one Diameter of ditto 3 Stroke 13 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines one Sizes of Pumps 6x3x6 No. and size of Suctions connected to both Bilge and Donkey pumps 2x2
 In Engine Room 1-2 In Holds, &c. 7-2 (Stokehold, fore peak, main hold, etc.)
 No. of Bilge Injections one sizes 3 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 Girth 2
 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 Yes
 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 Hold suction How are they protected 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
 Dates of examination of completion of fitting of Sea Connections 20.4.12 of Stern Tube 20.4.12 Screw shaft and Propeller 20.4.12
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from -

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Bleichwalger & Schulz Krauss & Co. Essen
 Total Heating Surface of Boilers 1557.5 Is Forced Draft fitted No No. and Description of Boilers 1 S.E. Multitubular
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 13.6.12 No. of Certificate 1907
 Can each boiler be worked separately Yes Area of fire grate in each boiler 40.3 No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 4.9 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 8 Mean dia. of boilers 13.6 Length 10.6 Material of shell plates Steel
 Thickness 1 3/16 Range of tensile strength 29-33 lbs. Are the shell plates welded or flanged No Descrip. of riveting cut seams 5/16 Lap
 long. seams 5/16 S with Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 17 3/8
 Per centages of strength of longitudinal joint rivets 89.9 Working pressure of shell by rules 202 Size of manhole in shell 16x12
 Size of compensating ring 10x30x1 3/8 No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3.38
 Length of plain part top 7.0 bottom 7.2 Thickness of plates crown 13 bottom 7 1/16 Description of longitudinal joint welded No. of strengthening rings -
 Working pressure of furnace by the rules 205 lbs. Combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 23/32 Top 1/4 Bottom 3/4
 Pitch of stays to ditto: Sides 8 1/2 x 9 1/2 Back 8 1/2 x 9 1/2 Top 7 x 9 1/2 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 240
 Material of stays Steel Diameter at smallest part 7.2 Area supported by each stay 2980 Working pressure by rules 253 Material of Front plates at bottom Steel
 Material Steel Thickness 1 1/2 Pitch of stays 17 x 17 1/2 How are stays secured to back Working pressure by rules 203 Material of stays Steel
 Diameter at smallest part 7.2 Area supported by each stay 2980 Working pressure by rules 253 Material of Front plates at bottom Steel
 Thickness 1 Material of Lower back plate Steel Thickness 1 Greatest pitch of stays 13 1/2 x 9 Working pressure of plate by rules 255
 Diameter of tubes 3 1/2 Pitch of tubes 5 x 4 1/2 Material of tube plates Steel Thickness: Front 1 Back 3/8 Mean pitch of stays 12.5 x 9 1/2
 Pitch across wide water spaces 13 1/2 Working pressures by rules 203 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 x 1 1/2 Length as per rule 2 1/10 Distance apart 9 1/2 Number and pitch of stays in each 307
 Working pressure by rules 214 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes
 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

VERTICAL DONKEY BOILER — Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety Valves _____
 No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *No propeller, two top & two bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of air pump valves, one main & one donkey feed chest valves, various bolts & nuts etc.*

The foregoing is a correct description, **FOR AMOS & SMITH LTD.**
 Manufacturer. *S. J. M.*

Dates of Survey while building { During progress of work in shops - 1912: - Feb. 1. 7. 13. 22. 27. Mar. 2. 6. 12. 16. 22. Secretary, Apr. 2. 10. 16. 20. 23. 26. May 2. 7.
 { During erection on board vessel - May 15. 16. 17. 23. 29. 31. Jun. 4. 12. 13. 19. 20. 22. 26. 27. 28. July 3. 4. 15. 17.
 Total No. of visits **37** Is the approved plan of main boiler forwarded herewith **yes**

Dates of Examination of principal parts—Cylinders *29.5.12* Slides *12.6.12* Covers *29.5.12* Pistons *4.6.12* Rods *4.6.12*
 Connecting rods *4.6.12* Crank shaft *29.5.12* Thrust shaft *10.4.12* Tunnel shafts *10.4.12* Screw shaft *10.4.12* Propeller *10.4.12*
 Stern tube *10.4.12* Steam pipes tested *27.6.12* Engine and boiler seatings *22.6.12* Engines holding down bolts *22.6.12*
 Completion of pumping arrangements *17.7.12* Boilers fixed *3.7.12* Engines tried under steam *3.7.12*
 Main boiler safety valves adjusted *3.7.12* Thickness of adjusting washers *S 3/8 P 3/16*
 Material of Crank shaft *Steel* Identification Mark on Do. *829 29.5.12* Material of Thrust shaft *Steel* Identification Mark on Do. *10.4.12 829*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *829 10.4.12 5.14.9* Material of Screw shafts *Iron* Identification Marks on Do. *829 10.4.12 5.14.9*
 Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special Survey, all of good material & workmanship & have been fitted & secured & braced in accordance with the Rules. They are now in good working condition & respectfully submitted as being eligible in my opinion to have record of 7.6. N. C. 7.12 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC 7.12
SJM 1.8.12

The amount of Entry Fee .. £	1	: 0 0	When applied for, 29.7.12
Special .. £	13	: 10 0	When received, 31.7.12
Donkey Boiler Fee .. £	:	: :	
Travelling Expenses (if any) £	:	: 2 0	

John W. Goyne
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **FRI. AUG. -2. 1912**
 Assigned *thme 7.12*

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

