

# REPORT ON MACHINERY.

Date of writing Report 23-11-14 is 23/11/14 Port of Hull Received at London Office WED. DEC. -9, 1914  
 No. in Survey held at Hull Date, First Survey 15-1-14 Last Survey 21-11-1914  
 Reg. Book. 403 on the steel screw trawler Lemberg (Number of Visits 48)  
 Master                      Built at Lelby By whom built Cochran & Sons Ltd Tons } Gross 275  
 Engines made at Hull By whom made Amos & Smith Ltd when made 1914-11 Net 147  
 Boilers made at Hull By whom made Amos & Smith Ltd when made 1914-11  
 Registered Horse Power                      Owners Lindsay Steam Fishing Co Ltd Port belonging to Grimsby  
 Nom. Horse Power as per Section 28 79 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3  
 Dia. of Cylinders 12 1/2 - 21 1/2 - 35 1/4 Length of Stroke 24 Revs. per minute                      Dia. of Screw shaft 7 1/2 Material of 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  
 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 36"  
 Dia. of Tunnel shaft 6 1/4 Dia. of Crank shaft journals 6 7/8 Dia. of Crank pin 7 Size of Crank webs 3 1/2 x 4 1/2 Dia. of thrust shaft under  
 collars 7 Dia. of screw 8-9 Pitch of Screw 11-0 No. of Blades 4 State whether moveable no Total surface 29 sq  
 No. of Feed pumps one Diameter of ditto 2 5/8 Stroke 12 Can one be overhauled while the other is at work                       
 No. of Bilge pumps one Diameter of ditto 3 Stroke 12 Can one be overhauled while the other is at work                       
 No. of Donkey Engines one + 2 Sizes of Pumps 6 1/2 x 4 3/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room two 2" dia In Holds, &c. one 2" in each compartment - all  
suctions also connected to engine  
 No. of Bilge Injections one sizes 3" Connected to condenser, or to circulating pump                      Is a separate Donkey Suction fitted in Engine room of size 2" dia  
 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 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 24-8-14 of Stern Tube 24-8-14 Screw shaft and Propeller 24-8-14  
 Is the Screw Shaft Tunnel watertight                      Is it fitted with a watertight door                      worked from                     

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel Phoenix, Abt, Heide, Verein Heide  
 Total Heating Surface of Boilers 1400 sq Is Forced Draft fitted no No. and Description of Boilers one single ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 29-10-14 No. of Certificate 3032  
 Can each boiler be worked separately                      Area of fire grate in each boiler 45 sq No. and Description of Safety Valves to  
 each boiler two spring loaded Area of each valve 4 9/16 Pressure to which they are adjusted 183 Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 7" lagged Mean dia. of boilers 13-0" Length 10-2" Material of shell plates steel  
 Thickness 1 1/2 Range of tensile strength 29-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double  
 long. seams R & B Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 7-65 Top of plates or width of butt straps 16 1/2  
 Per centages of strength of longitudinal joint                      Working pressure of shell by rules 180 lbs Size of manhole in shell 12" x 16"  
 Size of compensating ring 9" x 1 1/2 No. and Description of Furnaces in each boiler three plain Material steel Outside diameter 37 1/2  
 Length of plain part 78" Thickness of plates 3/4 Description of longitudinal joint welded No. of strengthening rings one pt  
 Working pressure of furnace by the rules 196 Combustion chamber plates: Material steel Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 1/16  
 Pitch of stays to ditto: Sides 9 1/2 x 7 Back 9 1/2 x 8 1/4 Top 9 x 7 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 207  
 Material of stays steel Diameter at smallest part 1 7/8 Area supported by each stay 66.5 Working pressure by rules 212 End plates in steam space:  
 Material steel Thickness 1 3/32 Pitch of stays 18 x 17 1/2 How are stays secured 7 x W Working pressure by rules 180 Material of stays steel  
 Diameter at smallest part 6.10 Area supported by each stay 315 Working pressure by rules 201 Material of Front plates at bottom steel  
 Thickness 31/32 Material of Lower back plate steel Thickness 15/16 Greatest pitch of stays 14 x 9 Working pressure of plate by rules 220  
 Diameter of tubes 3 1/2 Pitch of tubes 4 13/16 x 5 Material of tube plates steel Thickness: Front 3/32 Back 27/32 Mean pitch of stays 9 13/16  
 Pitch across wide water spaces 14 Working pressures by rules 184 lbs Girders to Chamber tops: Material steel Depth and  
 thickness of girder at centre 9" x 1 3/4 Length as per rule 2-9 Distance apart 9 Number and pitch of stays in each three 7"  
 Working pressure by rules 196 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                     

WS07-0056

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 & quantities of bolts & nuts sizes of various sizes*

The foregoing is a correct description,  
FOR AMOS & SMITH LTD.

*W J Bide* Manufacturer.

Managing Director

Dates of Survey while building: During progress of work in shops - *1914: Jan 15 April 27 May 18 June 10 23 July 3 26 31 Aug 20 21 24 25 Sep 5 4*  
During erection on board vessel - *9-10-15-18-21-23-25-29 Oct 1-7 9-14-20-22-23-24 27-29 Nov 6 9-10-14-17-20-21*  
Total No. of visits *40*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts - Cylinders *29-9-14* Slides *27-10-14* Covers *27-10-14* Pistons *23-10-14* Rods *23-10-14*  
Connecting rods *23-10-14* Crank shaft *23-10-14* Thrust shaft *20-9-14* Tunnel shafts  Screw shaft *24-8-14* Propeller *24-8-14*  
Stern tube *20-8-14* Steam pipes tested *9-11-14* Engine and boiler seatings *24-9-14* Engines holding down bolts *14-11-14*  
Completion of pumping arrangements *21-11-14* Boilers fixed *14-11-14* Engines tried under steam *17-11-14*  
Main boiler safety valves adjusted *17-11-14* Thickness of adjusting washers *P 1/32 I 5/16*  
Material of Crank shaft *Steel* Identification Mark on Do. *135 FLS* Material of Thrust shaft *Steel* Identification Mark on Do. *1257 FLS*  
Material of Tunnel shafts  Identification Marks on Do.  Material of Screw shafts *Iron* Identification Marks on Do. *1256 FLS*  
Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs*  
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 *Orianda, Piorno*

General Remarks (State quality of workmanship, opinions as to class, etc.) *The machinery of this vessel has been constructed under special survey, the materials & workmanship are good, the Boiler & steam pipes have been tested as above & found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion was tried under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 192 lbs.*

*In my opinion the vessel is eligible for the record + P.R.C. 1914-11*

It is submitted that this vessel is eligible for THE RECORD. + LMC 11.14.

The amount of Entry	£ 1 : 0	When applied for,	8/12/1914
Special	£ 11 : 17	When received,	31.12.14
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£ 8-2		

*Frank A. Stanger*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute - *FRI. DEC. 11. 1914*  
Assigned *+ L.M.C. 11.14*

MACHINERY CERTIFICATE

Port of *...*  
No. in Reg. Book *403*  
Built at *...*  
Owners *Lindsay*  
Yard No. *612*

DESCRIPTION OF *...*  
Capacity of Dynamo *...*  
Where is Dynamo fixed *...*  
Position of Main Switch *...*  
Positions of auxiliary *provided*

If fuses are fitted on circuits *yes*  
If vessel is wired on t...  
Are the fuses of non-...  
Are all fuses fitted in...  
are permanent ins...  
Are all switches and f...  
Total number of lights *2*  
A *Midship*  
B *Eng. Room*  
C *Forecastle*  
D  
E *3* Mast head lig...  
*2* Side lig...

If arc lights, what prote...  
Where are the switches...

DESCRIPTION OF CA...  
Main cable carrying...  
Branch cables carrying...  
Branch cables carrying...  
Leads to lamps carrying...  
Cargo light cables carrying...

DESCRIPTION OF INS...  
*600 Megohm*  
*Steel Tubes*

oints in cables, how mad...  
re all the joints of cable...  
positions, none being...  
re there any joints in o...  
ow are the cables led th...

*Spull*

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

