

# REPORT ON MACHINERY.

No. 55722

Port of Newcastle on Tyne

Received at London Office

SAT. 14 NOV 1908

No. in Survey held at North Shields

Date, first Survey July 24

Last Survey Oct 11 1908

Reg. Book.

on the Steel Screw Trawler Lily Melling

(Number of Visits 5)

Gross 246

Master J. S. Wragg

Built at North Shields

By whom built Smiths Dock Co Ltd 394

Net 96

Engines made at North Shields

By whom made Shield Engineering & Dry Dock Co Ltd 169

When built 1908

Boilers made at South Shields

By whom made J. T. Eltringham & Co

when made 1908

Registered Horse Power

Owners H. N. Melling

Port belonging to Fleetwood

Nom. Horse Power as per Section 28 85

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

**ENGINES, &c.**—Description of Engines *Triple expansion* No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12 1/2, 21, 35 Length of Stroke 26 Revs. per minute 108 Dia. of Screw shaft as per rule 7.55 Material of screw shaft as fitted 7 3/4

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

Dia. of Tunnel shaft as per rule 6.589 Dia. of Crank shaft journals as per rule 6.89 Dia. of Crank pin 7 1/8 Size of Crank webs 4 3/8 x 10 1/2 Dia. of thrust shaft under collars 7 1/8 Dia. of screw 9-6 Pitch of Screw 10-4 1/2 mean No. of Blades 4 State whether moveable No Total surface 29 1/2 sq ft

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

No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps Duplex 5 1/4, 3 1/2 - 5 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room two of 2" & ejector to all parts In Holds, &c. 1 of 2" dia

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump CP Is a separate Donkey Suction fitted in Engine room of size 4 or 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 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 (vinch steam) How are they protected wood casing & hold suction 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 22-9-08 of Stern Tube 22-9-08 Screw shaft and Propeller 22-9-08

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

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

Total Heating Surface of Boilers 1550 Is Forced Draft fitted No No. and Description of Boilers 1. S.E. Cyl' multitalular Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 24-9-08 No. of Certificate 7762

Can each boiler be worked separately Area of fire grate in each boiler 50 sq ft No. and Description of Safety Valves to each boiler two direct spring Area of each valve 4-9 Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 10 Mean dia. of boilers Length Material of shell plates Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings bottom Thickness of plates bottom Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space: Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each Working pressure by rules 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

If not, state whether, and when, one will be sent

Imp. & T.

W466-0167

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 Sa 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:—two top end bolts and nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, spare coupling bolts & nuts, spare feed & Belge pump valves, small iron bolts & nuts

The foregoing is a correct description, Manufacturer. THE SHIELDS ENGINEERING & DRILLING CO., LIMITED. W.R. Richardson

Dates of Survey During progress of work in shops - 1908 July 24 Aug 21 22 Sep 4 9 22 23 Oct 7 9 12 14 15 Nov 4 while building board vessel - - Total No. of visits 15 Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 14.8.08 Slides 21.8.08 Covers 14.8.08 Pistons 4.9.08 Rods 4.9.08 Connecting rods 9.9.08 Crank shaft 9.9.08 Thrust shaft 9.9.08 Tunnel shafts ✓ Screw shaft 28.7.08 Propeller 28.7.08 Stern tube 13.8.08 Steam pipes tested 14.10.08 Engine and boiler seatings 22.9.08 Engines holding down bolts 9.10.08 Completion of pumping arrangements 28.10.08 Boilers fixed 9.10.08 Engines tried under steam 28.10.08 Main boiler safety valves adjusted 28.10.08 Thickness of adjusting washers 7/8 & 1/8 Material of Crank shaft ✓ Identification Mark on Do. 2114ATC Material of Thrust shaft 2in Identification Mark on Do. 2114AT Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts 5in Identification Marks on Do. 2114AT Material of Steam Pipes Copper Test pressure 360lb at Bilton Jahans work

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

The machinery built under special survey the material and workmanship fine good and efficient. The machinery fitted up on board tested under steam and found satisfactory. Survey opinion the vessel is eligible for the notification of L.M.C. 11.08. to be made

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11.08

H.E.D. 14/11/08. W.R. Richardson 14-11-08

Table with columns: The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any), When applied for, When received.

Leonard G. Shallockross, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute Assigned TUES. 17 NOV 1908 + L.M.C. 11.08



Certificate (if required) to be sent to the Secretary of the Committee's Minute.