Rpt. 4.

REPORT ON MACHINERY.

No. 4698.

Port of Grimsby

Received at London Office TUES. APL 2 19 1907

No. in Reg. Book. Survey held at Grimsby. Date, first Survey 27th October 06 Last Survey 16th March 1907

on the Engines of trawler "CLEON" (Number of Visits 28.)

Tons: Gross 266. Net 120.

Master H. Dagger. Built at Selby By whom built Cochrane & Sons. 391 When built 1907.

Engines made at Grimsby. By whom made Gt. Central Coop. E. & S. R. Co. Ld. when made 1907.

Boilers made at Stockton. By whom made Blair & Co. Ld. when made 1907.

Registered Horse Power ✓ Owners Orient Steam Fishing Co. Ld. Port belonging to Grimsby.

Nom. Horse Power as per Section 28 74. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

Engines No. 40.

ENGINES, &c.—Description of Engines Trip. Exp. Surf. Cond. Inv. Cyl. No. of Cylinders 3. No. of Cranks 3.

Dia. of Cylinders 12¼. 22. 35. Length of Stroke 24. Revs. per minute 108. Dia. of Screw shaft as per rule 7.57. as fitted 7⅞. 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 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 ✓ as fitted Dia. of Crank shaft journals as per rule 6.93. as fitted 7¼ Dia. of Crank pin 7¼. Size of Crank webs 4¼ x 13½ Dia. of thrust shaft under collars 7¼. Dia. of screw 9-6. Pitch of Screw 11-0. No. of Blades 4 State whether moveable no Total surface 28 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 2. Diameter of ditto 2¼. Stroke 12. Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 6 x 5½ x 6 Pearn's No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Sea, bilge & hotwell 2" bore In Holds, &c. Hold, forepeak, F. W. Tank.

No. of Bilge Injections 1 sizes 3½. Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Ejector 2½.

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 none.

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 & forepk suctions 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 17th Jan. of Stern Tube 17th Jan. Screw shaft and Propeller 17th Jan 1907

Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door ✓ worked from ✓

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

For boiler particulars see Middlesbro' Report / 4907

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 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 rivets plate 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 bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings

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

W954-0047

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

~~No donkey boiler.~~

SPARE GEAR. State the articles supplied :— 2 each top & bottom end & main bearing bolts, a set of coupling bolts feed check valves, air circulating feed & bilge pump valves, bolts & nuts, safety valve springs, stud iron. propeller.

The foregoing is a correct description,

Manufacturer.

For the GREAT CENTRAL CO-OPERATIVE ENGINEERING & SHIP REPAIRING COMPANY, LTD.

Fred Lister

Secretary.

Dates of Survey while building — During progress of work in shops— 1906 :— Oct 27, 31, Nov 1, 8, 13, 21, 23, 27, Dec 6, 10, 11, 19, 1907 :— Jan 8, 18, 24, 25, Feb 2, 9, 12, 20. During erection on board vessel — 1907 :— Mar 4, 7, 8, 12, 15, 16

Total No. of visits Twenty Eight. Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts— Cylinders 2/1/06. 11/12/06 Slides 20/2/07 " " " donkey " " " 13/2/07. Covers 27/11/06 Pistons 25/1/07. 12/2/07 Beds 3/12/06.

Connecting rods 8/11/06 Crank shaft 24/1/07. Thrust shaft 4/3/07. Tunnel shafts ✓ Screw shaft 6/12/06 & 22/3/06 Propeller 22/12/06

Stern tube 22/12/06. Steam pipes tested 8/3/07. Engine and boiler seatings 27/2/07. Engines holding down bolts 4/3/07.

Completion of pumping arrangements 7/3/07. Boilers fixed 4/3/07. Engines tried under steam 14/3/07.

Main boiler safety valves adjusted 15/3/07. Thickness of adjusting washers 5/16.

Material of Crank shaft Iron (Steel pins). Identification Mark on Do. No 519. Material of Thrust shaft Iron. Identification Mark on Do. No 533.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. No 509.

Material of Steam Pipes Copper. Solid drawn. ¾ bore 6 S.W.G. Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) This Machinery has been constructed under Special Survey, the materials and workmanship are good and the case is, in my opinion, eligible for the notation + LMC 3.07.

This Office

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3.07.

JC. 3/4/07.

W.S. 3.4.07

Certificate (if required) to be sent to

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

The amount of Entry Fee..	£ 1 : 0 : 0	When applied for, 28/3/07 19..
Special	£ 11 : 2 : 0	
~~Donkey Boiler Fee~~ Total charged at Middlesbro'	£ 12 : 2 : 0	When received, 27/5/07 19..
~~Travelling Expenses (if any)~~	£ 3 : 14 : 0	
Inspection Fee	£8 : 8 : 0	

Committee's Minute

Assigned + L.M.C. 3.07.

WED. APL 3 1907

TUES. APL 23 1907

MACHINERY CERTIFICATE WRITTEN.

Cothe 28/5/07

D. Ritchie.

Engineer Surveyor to ~~Lloyd's~~ Register of British & Foreign Shipping.