

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 24 JUL 1936

Date of writing Report 21. 7. 36 When handed in at Local Office 21. 7. 36 Port of MIDDLESBROUGH.

No. in Survey held at SOUTH BANK. Date, First Survey 5<sup>th</sup> Dec/35 Last Survey 17. 7. 1936.

Reg. Book. on the steam trawler "ANGLE" (Number of Visits)

Built at South Bank. By whom built Smiths Dock Co. Ltd. Yard No. 1005. When built 1936.

Engines made at do. By whom made do. Engine No. 463. when made 1936.

Boilers made at Hartlepool By whom made Richardson's Westgarth & Co. Boiler No. D. 463 when made 1936.

Registered Horse Power Owners Hull Northern Fishing Co. Ltd. Port belonging to Hull.

Nom. Horse Power as per Rule 165. Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted Ys.

Trade for which Vessel is intended Fishing

**ENGINES, &c.** Description of Engines Compound Uniflow. Revs. per minute 145.

Dia. of Cylinders 11 1/8 (3) 27 1/4 (2). Length of Stroke 25 1/4. No. of Cylinders 4. No. of Cranks 4.

Crank shaft, dia. of journals as per Rule 8.6. Crank pin dia. 8 3/4. Crank webs Mid. length breadth 14 1/4. Thickness parallel to axis 5 1/2. Mid. length thickness 5 1/2. Thickness around eye-hole 3 1/2.

Intermediate Shafts, diameter as per Rule 8.15. Thrust shaft, diameter at collars as per Rule 8.6.

Tube Shafts, diameter as fitted 8 1/4. Screw Shaft, diameter as fitted 9.0. Is the tube shaft fitted with a continuous liner Ys.

Bronze Liners, thickness in way of bushes as per Rule 19. Thickness between bushes as fitted 32. Is the after end of the liner made watertight in the propeller boss Ys.

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Ys.

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 Ys.

If two liners are fitted, is the shaft lapped or protected between the liners Ys. Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Ys.

Propeller, dia. 10' 0". Pitch 10' 3". No. of Blades 4. Material C.I. whether Moveable no. Total Developed Surface 40 sq. feet.

Feed Pumps worked from the Main Engines, No. 1. Diameter 3 1/4. Stroke 11. Can one be overhauled while the other is at work Ys.

Bilge Pumps worked from the Main Engines, No. 1. Diameter 3 1/4. Stroke 11. Can one be overhauled while the other is at work Ys.

Feed Pumps { No. and size 1-6" x 4 1/2" x 6" DUPLEX & INJECTOR. Pumps connected to the { No. and size 1-6" x 4 1/2" x 6" DUPLEX & EJECTOR.

{ How driven Steam Main Bilge Line { How driven Steam.

Ballast Pumps, No. and size 1-6" x 4 1/2" x 6" DUPLEX. Lubricating Oil Pumps, including Spare Pump, No. and size Ys.

Are two independent means arranged for circulating water through the Oil Cooler Ys. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room 2-2".

In Holds, &c. 1-2 1/2" For? SLUSH WELL; 1-2" For? SLUSH WELL; 1-2" For? STORE.

**Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-4 1/2".** Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2" & EJECTOR.

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Ys.

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Ys.

Are all Sea Connections fitted direct on the skin of the ship Ys. Are they fitted with Valves or Cocks both.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Ys. Are the Overboard Discharges above or below the deep water line above.

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Ys. Are the Blow Off Cocks fitted with a spigot and brass covering plate Ys.

What Pipes pass through the bunkers Wash Deck & Steam to haul which How are they protected Steel Casings & lashed.

What pipes pass through the deep tanks Have they been tested as per Rule Ys.

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Ys.

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another Ys.

Is the Shaft Tunnel watertight none. Is it fitted with a watertight door worked from Ys.

**MAIN BOILERS, &c.** (Letter for record S. Total Heating Surface of Boilers 2714 sq. ft.

Is Forced Draft fitted Ys. No. and Description of Boilers 1 SR. Working Pressure 225 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Ys.

IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded? Ys.

**PLANS.** Are approved plans forwarded herewith for Shafting 5. 3. 36. Main Boilers Auxiliary Boilers Donkey Boilers

(If not state date of approval)

Superheaters General Pumping Arrangements 31. 3. 36 Oil fuel Burning Piping Arrangements Ys.

**SPARE GEAR.** State the articles supplied:—As per Rules + 1 C.I. propeller, 1 main and 1 donkey, check valve his, 1 safety valve spring, 1 suction and 1 delivery valve for each donkey, 1 feed pump plunger, 1 centrifugal pump shaft, 6 pump ring studs, 1 set air pump valves, 1 piston rod gland, 1 slide rod gland, 3 condenser tubes, 20 condenser ferrules, 3 boiler tubes.

The foregoing is a correct description,  
FOR SMITH'S DOCK CO. LTD.

*W. W. W. W.*

Manufacturer.



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Dates of Survey while building  
During progress of work in shops -- 1935 Dec 5 1936 Jan 8 29 30 Feb 9 19 24 25 Mar 13 17 23 31 Apr 2 3 6 9 15 21 24 28 30 May 4 12 15 25 26 27 28 Jun  
During erection on board vessel --- 4 5 17 25 30 July 1 2 7 9 16 17  
Total No. of visits 39

Dates of Examination of principal parts—Cylinders 24. 4. 36. Slides 4. 5. 36. Covers 24. 4. 36.  
Pistons 4. 5. 36. Piston Rods 4. 5. 36. Connecting rods 12. 5. 36.  
Crank shaft 9. 4. 36. Thrust shaft 12. 3. 36. Intermediate shafts 3. 4. 36.  
Tube shaft ✓ Screw shaft 3. 4. 36. Propeller 4. 6. 36.  
Stern tube 4. 6. 36. Engine and boiler seatings 5. 6. 36. Engines holding down bolts 30. 6. 36.  
Completion of fitting sea connections 5. 6. 36.  
Completion of pumping arrangements 9. 7. 36. Boilers fixed 30. 6. 36. Engines tried under steam 17. 7. 36.  
Main boiler safety valves adjusted 9. 7. 36. Thickness of adjusting washers p. 3/8" s 13/32" Superheated 11/32"  
Crank shaft material S.M. Steel Identification Mark LLOYDS No 2326 CRR 12.3.36 Thrust shaft material S.M. Steel Identification Mark LLOYDS No 2329 CRR 12.3.36  
Intermediate shafts, material S.M. Steel Identification Marks LLOYDS No 2327 CRR 3.4.36 Tube shaft, material ✓ Identification Mark ✓  
Screw shaft, material S.M. Steel Identification Mark LLOYDS No 2327 CRR 3.4.36 Steam Pipes, material Steel ✓ Test pressure 675 lbs ✓ Date of Test 7. 9. 36.  
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 the Rules for the use of oil as fuel been complied with ✓  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. If so, have the requirements of the Rules been complied with ✓  
Is this machinery duplicate of a previous case No. If so, state name of vessel LOCH MONTEITH & GAUL.

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

The materials and workmanship are good.

This machinery has been built under special survey and in accordance with the Rules and approved plans. It has been securely fitted aboard and tested under working conditions with satisfactory results and is, in my opinion, eligible for classification with record + L.M.C. 7. 36.

Certificate to be sent to

The amount of Entry Fee ... £ 3.00.0  
Special ... £ 22.19.0  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 23. 7. 1936  
When received, 1. 9. 1936

Committee's Minute WED. 5 AUG 1936

Assigned + Lmb. 7. 36  
F.D., C.L.

Engineer Surveyor to Lloyd's Register of Shipping.



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