

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

12 AUG '36

Date of writing Report 10.8.1936 When handed in at Local Office 10.8.1936 Port of MIDDLESBROUGH.  
 No. in Survey held at SOUTH BANK. Date, First Survey 23 March Last Survey 6.8.1936.  
 Reg. Book. on the steam trawler "INDIAN STAR" (Number of Visits 26) Tons } Gross 463.  
 Built at South Bank. By whom built Smiths Dock Co Ltd. Yard No. 999. Net 169  
 Engines made at do. By whom made do. Engine No. 473. When built 1936.  
 Boilers made at Hartlepool By whom made Richardsons, Wetgarth & Co. Boiler No. D.473 when made 1936.  
 Registered Horse Power 131.4. Owners Gresham Trawlers Limited Port belonging to Greenisby  
 Nom. Horse Power as per Rule 131.4. 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 Triple Expansion Revs. per minute 140.  
 Dia. of Cylinders 13 1/2, 22 1/2, 39" Length of Stroke 26. No. of Cylinders 3. No. of Cranks 3.  
 Crank shaft, dia. of journals as per Rule 7.74. Crank pin dia. 8" Crank webs Mid. length breadth 11 1/2" Thickness parallel to axis 4 1/2"  
 as fitted 7 3/8" Mid. length thickness 4 1/2" shrunk Thickness around eye-hole 3 1/2"  
 Intermediate Shafts, diameter as per Rule 7.37. Thrust shaft, diameter at collars as per Rule 7.74.  
 as fitted 7 1/2" as fitted 7 3/8"  
 Tube Shafts, diameter as per Rule 8.18. Screw Shaft, diameter as per Rule 8 1/2" Is the tube shaft fitted with a continuous liner } Ys.  
 as fitted 8 1/2" as fitted 8 1/2" Is the screw shaft fitted with a continuous liner } Ys.  
 Bronze Liners, thickness in way of bushes as per Rule 9. Thickness between bushes as per Rule 9. Is the after end of the liner made watertight in the  
 as fitted 9 1/2" as fitted 9 1/2" 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 no. If so, state type Ys. Length of Bearing in Stern Bush next to and supporting propeller 3'-6"  
 Propeller, dia. 10'-0" Pitch 9'-7 1/2" No. of Blades 4 Material C.I. whether Moveable no. Total Developed Surface 36 sq. feet  
 Feed Pumps worked from the Main Engines, No. 1 Diameter 3" Stroke 13 1/2" Can one be overhauled while the other is at work Ys.  
 Bilge Pumps worked from the Main Engines, No. 1 Diameter 3" Stroke 13 1/2" Can one be overhauled while the other is at work Ys.  
 Feed Pumps { No. and size 1-6x3 1/2 x 6" Duplex. Pumps connected to the { No. and size 1-6x4 x 6" EJECTOR.  
 How driven STEAM Main Bilge Line { How driven STEAM  
 Ballast Pumps, No. and size 1-6x4 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. 2'-2 1/2" for SLUDGE TANKS. 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" Are all the Bilge Suction Pipes in holds and tunnel Ys. filled 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 bunker Steam to which & wash down. How are they protected lagged & steel casing.  
 What pipes pass through the deep tanks Ys. 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 Ys. worked from Ys.

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 2465 sq. ft.  
 Is Forced Draft fitted no. No. and Description of Boilers 1 S.B. Working Pressure 225 lbs.  
 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 2.5.34 Main Boilers Auxiliary Boilers Donkey Boilers  
 (If not state date of approval)  
 Superheaters 12.10.34 General Pumping Arrangements 7.3.33. Oil fuel Burning Piping Arrangements Ys.

SPARE GEAR. State the articles supplied:— As per Rules & 1 C.I. propeller, 1 set feed & bilge pump valve & seats, 1 set air pump valve, 1 feed pump stem & nut, 1 feed pump gland & nut & rings, 1 copper feed pipe, 1 main & 1 donkey check valve lid, 2 Duplex pump valves, 6 piston bolts & nuts, 2 safety valve springs, 1 opening for each air escape valve, 3 boiler tube

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

Manufacturer.



Dates of Survey while building

During progress of work in shops --- 1936. Mar 23 Apr 3 6 21 22 30 May 4 9 15 26 27 28 Jun 4 12 15 24 30 July 7

During erection on board vessel --- 17, 21, 22, 23, 24, 28, 31 Aug 6

Total No. of visits 26

Dates of Examination of principal parts—Cylinders 4. 6. 36. Slides 4. 6. 36. Covers 4. 6. 36.

Pistons 12. 6. 36. Piston Rods 12. 6. 36. Connecting rods 12. 6. 36.

Crank shaft 27. 5. 36. Thrust shaft 3. 4. 36. Intermediate shafts 22. 4. 36.

Tube shaft ✓ Screw shaft 22. 4. 36. Propeller 7. 7. 36.

Stern tube 4. 6. 36. Engine and boiler seatings 7. 7. 36. Engines holding down bolts 17. 7. 36.

Completion of fitting sea connections 7. 7. 36.

Completion of pumping arrangements 6. 8. 36. Boilers fixed 17. 7. 36. Engines tried under steam 31. 7. 36.

Main boiler safety valves adjusted 31. 7. 36 1/8. 36 Thickness of adjusting washers superheated 9/32.

Crank shaft material S.M. Steel Identification Mark <sup>LLOYDS. No 2418.</sup> CRR 3. 4. 36 Thrust shaft material S.M. Steel Identification Mark <sup>LLOYDS. No 2419.</sup> CRR 3. 4. 36

Intermediate shafts, material S.M. Steel Identification Marks <sup>LLOYDS. No 2420.</sup> CRR 22. 4. 36 Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material S.M. Steel Identification Mark <sup>LLOYDS. No 2421.</sup> CRR 22. 4. 36 Steam Pipes, material Steel ✓ Test pressure 675 lbs. Date of Test 24. 7. 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 Yes. If so, state name of vessel Melbourne class. Nat. Reg. 15670.

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 successfully fitted aboard and tested under working conditions with satisfactory results and is, in my opinion, eligible for classification with record + L.M.C. 8. 36.

Certificate 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 ... £ 3-0-0 When applied for,

Special <sup>Less Boiler</sup> ... £ 16-3-0 11. 8. 19. 36

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 2. 10. 19. 36 5/10

P. J. McA. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 25 AUG 1936

Assigned + Lamb 8. 36

