

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 12 JAN 1954

Date of writing Report 9.12.53. 19 When handed in at Local Office 30 DEC 1953 Port of H.U.L.L.
 No. in Survey held at HULL. Date, First Survey 18. 10. 52 Last Survey 24. 11. 19 53
 Reg. Book 21436 on the Steam Trawler "NORTHERN CROWN"
 Built at Selby. By whom built Cochrane & Sons, Ltd., Yard No. 1386 When built 1953
 Engines made at Hull. By whom made Amos & Smith, Ltd., Engine No. 840 When made 1953
 Boilers made at Hull. By whom made -do- Boiler No. 840 When made 1953
 Registered Horse Power - Owners Northern Trawlers, Ltd. Port belonging to Grimsby.
 Nom. Horse Power as per Rule 207 ✓ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended Ocean going trawler.

ENGINES, &c.—Description of Engines Triple Expansion ✓ Revs. per minute 120 ✓
 Dia. of Cylinders 15½", 27½", 45" ✓ Length of Stroke 30" ✓ No. of Cylinders 3 ✓ No. of Cranks 3
 Crank shaft, dia. of journals as per Rule Approved. Mid. length breadth 18½" Thickness parallel to axis 5¾"
 as fitted 9½" ✓ Crank pin dia. 9½" ✓ Crank webs Mid. length thickness 5¾" shrunk Thickness around eye-hole 4¼"
 Intermediate Shafts, diameter as per Rule Approved. Thrust shaft, diameter at collars as per Rule Approved.
 as fitted 10" in body; 9½" at coupling ✓ as fitted 9½" ✓
 Tube Shafts, diameter as per Rule Approved. Screw Shaft, diameter as fitted 10" T.O.C. ✓ Is the ~~xxx~~ screw shaft fitted with a continuous liner Yes ✓
 as fitted - Thickness between bushes as fitted ½" Is the after end of the liner made watertight in the propeller boss Yes ✓
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner -
 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 - Is an approved Oil Gland or other appliance fitted at the after end of the tube -
 at No If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 46" ✓
 Propeller, dia. 11'-6" ✓ Pitch 11.96' No. of Blades four Material Nikalium whether Moveable No Total Developed Surface 46.5 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2.7/8" Stroke 15" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2.7/8" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps No. and size One-6"x 8½" x 18" Pumps connected to the Main Bilge Line (No. and size Two-2.7/8"x15"; One 7"x5"x8"; One 2" Mono
 How driven Steam. Main Bilge Line (How driven M.E. Stm. Duplex. Elec.
 Ballast Pumps, No. and size One 7"x5"x8" Stm. Duplex. Lubricating Oil Pumps, including Spare Pump, No. and size -
 Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected both to Main Bilge Pumps and Auxiliary
 Bilge Pumps:—In Engine and Boiler Room Two - 2½" in E.R. ✓ Two 2½" in B.R. ✓
 In Pump Room - In Holds, &c. One 2" in each of chain locker, store, fwd. fish room,
 fwd. slush well, after fish room, after slush well, P. & S. cofferdams, pipe duct. ✓
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One 5" ✓ Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, Yes ✓
 No. and size One 3" bilge ejector ✓ Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes ✓
 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 Yes ✓
 Are all Sea Connections fitted direct on the skin of the ship Yes or to welded boxes. ✓ Are they fitted with Valves or Cocks. Yes ✓
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates. Yes ✓ 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. Yes ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate. Yes ✓
 What Pipes pass through the bunkers. - How are they protected. -
 What pipes pass through the deep tanks. - Have they been tested as per Rule. Yes ✓
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times. Yes ✓
 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. Yes ✓ Is the Shaft Tunnel watertight Part of E.R. it fitted with a watertight door - worked from. -

MAIN BOILERS, &c.—(Letter for record s) Total Heating Surface of Boilers 2,900 & 1,150 = 4,050 sq.ft.
 Which Boilers are fitted with Forced Draft Sole ✓ Which Boilers are fitted with Superheaters Sole ✓
 No. and Description of Boilers One S.E. Multitubular. ✓ Working Pressure 225 lb/sq.inch. ✓
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? -

Can the donkey boiler be used for other than domestic purposes 30.4.52.
PLANS. Are approved plans forwarded herewith for Shafting 27.8.52. Main Boilers 24.4.52. Auxiliary Boilers - Donkey Boilers -
 (If not state date of approval)
 Superheaters 10.1.50 General Pumping Arrangements 22.7.53. Oil fuel Burning Piping Arrangements -
 (for "Lord Lovat") SPARE GEAR.
 Has the spare gear required by the Rules been supplied Yes.
 State the principal additional spare gear supplied. No Major items.

I.H.P. 1150 @ 120 R.P.M.

The foregoing is a correct description.

AMOS & SMITH LTD.

A.P. Kealey
DIRECTOR

Manufacturer.



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Lloyd's Register

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Dates of Survey while building
 During progress of work in shops - - { 1952 Oct 18, 21, 31, 1953 Mar 2, 3, 6, Apr 23, May 8, 11, 13, July 17, Aug 13.
 During erection on board vessel - - - { 1953 July 22, Sep 16, Oct 19, 22, Nov 11, 13, 14, 16, 19, 20, 24.
 Total No. of visits 24.

Dates of Examination of principal parts - Cylinders H.P. & M.P. 2.3.53. L.P. 6.3.53. Slides 23.4.53. Covers 2.3.53. & 6.3.53.
 Pistons 23.4.53. Piston Rods 23.4.53. Connecting rods 23.4.53.
 Crank shaft 4.3.53. Thrust shaft 14.10.52. Intermediate shafts 30.10.52.
 Tube shaft - Screw shaft 24.10.52. Propeller 22.12.52.
 Stern tube 17.3.53. Engine and boiler seatings 17.3.53.. Engines holding down bolts 13.11.53.

Completion of fitting sea connections 17.3.53.
 Completion of pumping arrangements 20.11.53. Boilers fixed 19.10.53. Engines tried under steam 20.11.53.
 Main boiler safety valves adjusted 20.11.53. Thickness of adjusting washers P. 1/2", S. 1/2", Spt. 5/16".

Crank shaft material O.H. Steel. Identification Mark 3637 K.F. 18.9.52. Thrust shaft material O.H. Steel. Identification Mark 14.10.52.
 Intermediate shafts, material -do- Identification Mark CSN 30.10.52. Tube shaft, material - Identification Mark -
 Screw shaft, material -do- Identification Mark CSN 24.10.52. Steam Pipes, material O.H. Steel. Test pressure 450 lb/sq. in. Date of Test 16.11.53.

Is an installation fitted for burning oil fuel. Yes Is the flash point of the oil to be used over 150° F. Yes
 Have the requirements of the Rules for the use of oil as fuel been complied with. Yes
 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. -
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with. -
 Is this machinery duplicate of a previous case. No If so, state name of vessel. -

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

The Machinery of this vessel has been constructed and installed under Special Survey in accordance with the Secretary's letters, approved plans and the Rules. The Material and workmanship are good. On completion the Main and Auxiliary Machinery was examined under working conditions and found in order. The Machinery is eligible in my opinion to have the Notation:-
 *LMC 11,53 C.L. 3 cyl. 15 1/2", 27 1/2", 45" - 30".
 225 lbs. 1 S.B. (Spt).
 3 c.f. H.S. 4050 sq. ft. F.D.
 Fitted for oil fuel 10,53 F.P. above 150° F.

Crankshaft identification marks:- Coupling & L.P. journal 3473 K.F. 14.8.52.
 journals 3464 K.F. 17.8.52.
 Webs 3456/7/8 K.F. 25.7.52.
 Pins 3474 K.F. 11.8.52.

Inst. Blr.				
The amount of Entry Fee	£43	4	0	When applied for,
Const. & Int. Machy.	75	0	0	1 JAN 1954
Special	£			
Donkey Boiler Fee	£			When received,
Travelling Expenses (if any)	£		19	

A. Wood
 Engineer Surveyor to Lloyd's Register of Shipping.

Date FRIDAY 29 JAN 1954

Committee's Minute + LMC 11.53
 1 # SB 225 lb. (Spt.) Fitted for O.F. 11.53 F.P. above 150° F.
 C.L.



18.1.54

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