

REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office

4 APR 1950

NEWCASTLE-on-TYNE

Date of writing Report.....19..... When handed in at Local Office.....3 - APR 1950.....19.....

Port of

No. in Survey held at Hebburn-on-Tyne Date. First Survey 17/1/50 Last Survey 20th March 1950
Reg. Book. 07782 on the Machinery of the Wood, Iron or Steel M/V "ECHODALE" (No. of Visits.....13.....)

Tonnage { Gross 8212 Vessel built at Newcastle By whom Hawthorn Leslie & Co. Ltd When 1941 3
 Net 4805 Engines made at do By whom do When 1941
 Nominal Horse Power 502 MN Boilers, when made (Main) ✓ (Donkey) 1941
 No. of Main Boilers ✓ Owners The Admiralty Owners' Address ✓
 No. of Donkey Boilers 1 DB Managers ✓ (if not already recorded in Appendix to Register Book.)
 Steam Pressure ✓ Port London Voyage ✓
 in Main Boilers ✓ If Surveyed Afloat or in Dry Dock Afloat & in dry dock
 in Donkey Boilers 180 lb. (State name of Dock.) at Holmes-Hebburn Co. Ltd. Hebburn

Last Report No. _____ Port _____

Particulars of Examination and Repairs (if any) C.S., D.B.S.; OWNER'S ALTERATIONS.

(Periodical Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.)

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined ✓Was a damage report made by anyone else? If so, by whom? ✓Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? ✓" " Donkey " " " YesIf not, state for what reasons ✓What parts of the Boilers could not be thus thoroughly examined? ✓What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? ✓State latest date of internal examination of each boiler 13/2/50Present condition of funnel(s) EfficientDid the Surveyor examine the Safety Valves of the Main Boilers? ✓To what pressure were they afterwards adjusted under steam? ✓Did the Surveyor examine the Safety Valves of the Donkey Boiler? YesTo what pressure were they afterwards adjusted under steam? 180 lb.Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? ✓and of the Donkey Boilers? YesDid the Surveyor examine the drain plugs of the Main Boilers? ✓and of the Donkey Boilers? ✓Did the Surveyor examine all the mountings of the Main Boilers? ✓and of the Donkey Boilers? YesHas the screw shaft now been drawn and examined? NoHas it a continuous liner? ✓Is an approved oil retaining appliance fitted at the after end? NoHas shaft now been changed? ✓ If so, state reasons ✓Has the shaft now fitted been previously used? ✓Has it a continuous liner? ✓Is an approved oil retaining appliance fitted at the after end? ✓State date of examination of Screw Shaft ✓State the wear down in the stern bush 0.154"Is electric light and/or power fitted? YesIf so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? NoHas the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? NoIf the Survey is not complete, state what arrangements have been made for its completion and what remains to be done C.S.

Now done:- Vessel in dry dock:- Laid propeller, aft end of stern tube; outside fastenings of the sea connections; sea valves & cocks opened up; all found or placed in efficient condition.

D.B.S.:- The donkey scotch boiler exd in its entirety with the mountings opened up and found or placed in safe working order. On the completion of repairs the boiler exd under steam and the safety valves adjusted to the above pressure. The oil fuel & steam smothering installations tested under working conditions & a general examination made of the deck control gear & oil discharge pipes between the pumps & burners

C.S.:- Laid opened up:- Main engine - all cylinders; covers; liners; valves; pistons & rods; crossheads; top & bottom end bearings; main bearings; crankshaft complete; attached H.P. Fuel Pumps, lubricating oil, F.W. cooling & S.W. cooling pumps; and sanitary pumps. Aux:- Aux Condenser, Diesel compressor engine; Diesel & steam gen^r engines; steering gear engine and hyd pump. (See Continuation Sheet)

General Observations, Opinion, and Recommendation:—

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, BS 9,11, DMS 9,11, LMC 9,11 or LMC 140 lb., FD, &c.)

My opinion to remain as classed and to have fresh records of D.B.S. 3,50, and +LMC(CS) with date when the survey has been completed—

Survey Fee (per Section 29).....D.B.S. 3 : 0 : 0 Fees applied for 3 APR 1950
 Special ~~Damage~~ Repair Fee (if any).....CS 16 : 0 : 0
 (per Section 29.) ALTERATIONS 10 : 10 : 0 Received by me, ✓
 Travelling expenses (if chargeable).....£ 19

Committee's Minute FRI. 19 MAY 1950Assigned As now
DBS. 3.50

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation

002583-002591-0181/13

M/V "ECHODALE"SHEET N^o 2

Repairs W&T:- All main engine piston flanges lightly skimmed, ring grooves machined to a standard size and rings renewed.
 All liners - ridges ground off.
 Nos. 6 & 7 bottom end bearings re-metalled.
 No. 1 top end bearing re-metalled.
 Attached Salt Water & Sanitary Pump sent to makers Messrs Stothert & Pitt and reconditioned.
 Attached Fresh Water, ~~& Sanitary Pumps~~ gland sleeves on spindles renewed.
 H.P. Fuel pumps sent to makers Messrs Hawthorn Leslie & Co Newcastle and overhauled and reconditioned in connection with burning boiler oil.

Auxs:- Aux condenser retubed & fitted with Crane's packing, and the water box castings renewed.
 Diesel generator engine - 1 main bearing kept renewed, aft cylinder block renewed complete.
 Steam generator engine - Piston & valve rods renewed.
 Governor valve spindle & sleeve renewed.
 Steering engine - Steam cylinder bored & a new piston & rings fitted. Piston & valve rods renewed.
 One ball race renewed in Helo-Shaw pump.
 Donkey Boilers - 8 bottom rows of tubes expanded in centre cc.
 Cast Steel safety valve chest removed from shell & eroded casting in way of seats built up with E.W. annealed, machined new seats fitted, casting hyd. tested & found efficient & refitted.

Owner's Alterations:- The Owners have now fitted an installation to the vessel to enable boiler oil to be burned in the main engines in the place of Diesel Oil in accordance with the attached plans previously submitted for consideration.

The existing port side settling tank now fitted with heating coils and used for storage of purified boiler oil. The existing starboard side settling tank now subdivided into two compartments, the outboard compartment being used for carrying Diesel oil, and the inboard compartment now fitted with heating coils & used for storing unpurified boiler oil.

A De Laval purifying & clarifying installation fitted in starboard tween deck for conditioning the boiler oil together with an Oil Fuel Heater marked "Heatrac Heater Size A150. Ref No. 04042." for heating the oil before purifying.

A Swinney type oil fuel heater fitted for heating the the purified boiler oil before injection Lloyd's No 19977. Copy of Certificate attached.

The existing Diesel oil transfer pump now connected up to transfer boiler oil to unpurified oil tank.

See Continuation Sheet 3

M/V "ECHODALE."

SHEET No 3.

Owner's Alterations:- A new Hayward Tyler pump No 43212, 6" x 5" x 6" now fitted to act as the Diesel oil transfer pump and arranged to be controlled from deck.
Continued. The fuel valve cooling system modified and a new pump Hayward Tyler No 43184, 3" x 2 3/4" x 3" fitted for circulating fresh water through these valves

On the conclusion of the repairs and the alterations the main engine was examined during a mooring trial operating on both Diesel oil & boiler oil (stated to be Admiralty Bunker D quality) and found to be efficient

The following Approved Plans attached

(2 Sheets)

Arrgt of Suctions & discharges for main Engine Diesel & Heavy Oil Supply
 Heating Coils in cross bunker.

Heating Coils

Fuel Valve Heating & Cooling System (Original & as Fitted)

Diagrammatic Arrangement of Oil Fuel Pipes

Steam & Exhaust Piping

R. R. Bolton
 SURVEYOR TO LLOYD'S REGISTER.
 NEWCASTLE-ON-TYNE