

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 15 JAN 1945

Date of writing Report 8-1-1945 When handed in at Local Office 15 JAN 1945 Port of *Sp. Dutch*

No. in Survey held at *Biccles* Date, First Survey 20-11-44 Last Survey 8-1-1945  
 Reg. Book "Yic 82" (Number of Visits *3*)

Built at *Knottingley* By whom built *John Harker Ltd.* Yard No. *183* Tons *Gross*  
 Engines made at *Biccles* By whom made *Elliott & Garrood Ltd.* Job No. *662* Net *1945*  
 Boilers made at *Aman* By whom made *Cochran Co. (Aman)* Engine No. *685* When made *1945*  
 Registered Horse Power *6.9* Owners *Ministry of War Transport* Port belonging to *✓*  
 Nom. Horse Power as per Rule *6.9* Is Refrigerating Machinery fitted for cargo purposes *✓* Is Electric Light fitted *✓*  
 Trade for which vessel is intended *Coasting*

ENGINES, &c.—Description of Engines *Compound Reciprocating* Revs. per minute *150*

Dia. of Cylinders *10 1/2" - 22"* Length of Stroke *14"* No. of Cylinders *Two* No. of Cranks *Two*

Crank shaft, dia. of journals *as per Rule 4 3/8"* Crank pin dia. *4 3/8"* Crank webs *Mid. length breadth* Thickness parallel to axis *2 7/8"*  
*as fitted 4 3/8"* Mid. length thickness *shrunk* Thickness around eye-hole *2"*

Intermediate Shafts, diameter *as per Rule* Thrust shaft, diameter at collars *as per Rule 4 26"*  
*as fitted* *as fitted 4 3/8"*

Tube Shafts, diameter *as per Rule* Screw Shaft, diameter *as per Rule 4 7/8"* Is the *tube* shaft fitted with a continuous liner *✓*  
*as fitted* *as fitted 4 7/8"* *screw* *40*

Bronze Liners, thickness in way of bushes *as per Rule* Thickness between bushes *as per Rule* Is the after end of the liner made watertight in the  
*as fitted* *as fitted* propeller boss *✓* 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 *✓* If so, state type *✓* Length of Bearing in Stern Bush next to and supporting propeller *20"*

Propeller, dia. *66"* Pitch *86"* No. of Blades *4* Material *C.I.* whether Moveable *✓* Total Developed Surface *11.6* sq. feet

Feed Pumps worked from the Main Engines, No. *6* Diameter *2 1/8"* Stroke *6"* Can one be overhauled while the other is at work *✓*  
 Bilge Pumps worked from the Main Engines, No. *6* Diameter *2 1/8"* Stroke *6"* Can one be overhauled while the other is at work *✓*

Feed Pumps { No. and size *✓* Pumps connected to the { No. and size *✓*  
 How driven *✓* Main Bilge Line { How driven *✓*

Ballast Pumps, No. and size *✓* Lubricating Oil Pumps, including Spare Pump, No. and size *✓*

Are two independent means arranged for circulating water through the Oil Cooler *✓* Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps: —In Engine and Boiler Room *✓* In Holds, &c. *✓*

Main Water Circulating Pump Direct Bilge Suctions, No. and size *✓* Independent Power Pump Direct Suctions to the Engine Room Bilges, *✓*  
 No. and size *✓* Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes *✓*  
 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 *✓*  
 Are all Sea Connections fitted direct on the skin of the ship *✓* Are they fitted with Valves or Cocks *✓*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *✓* Are the Overboard Discharges above or below the deep water line *✓*  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel *✓* Are the Blow Off Cocks fitted with a spigot and brass covering plate *✓*  
 What Pipes pass through the bunkers *✓* How are they protected *✓*  
 What pipes pass through the deep tanks *✓* Have they been tested as per Rule *✓*  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *✓*  
 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 *✓* Is the Shaft Tunnel watertight *✓* Is it fitted with a watertight door *✓* worked from *✓*

MAIN BOILERS, &c.—(Letter for record *✓*) Total Heating Surface of Boilers *✓*  
 Which Boilers are fitted with Forced Draft *✓* Which Boilers are fitted with Superheaters *✓*  
 No. and Description of Boilers *✓* Working Pressure *✓*

IS A REPORT ON MAIN BOILERS NOW FORWARDED? *✓*  
 IS A DONKEY BOILER FITTED? *✓* If so, is a report now forwarded? *✓*  
 Can the donkey boiler be used for domestic purposes only *✓*

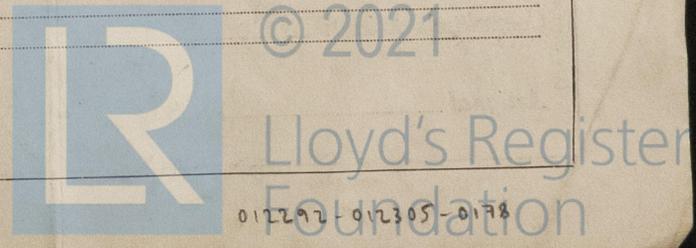
PLANS. Are approved plans forwarded herewith for Shafting *28.10.41* Main Boilers *✓* Auxiliary Boilers *✓* Donkey Boilers *✓*  
 (If not state date of approval)

Superheaters *✓* General Pumping Arrangements *✓* Oil fuel Burning Piping Arrangements *✓*

### SPARE GEAR.

Has the spare gear required by the Rules been supplied *✓*  
 State the principal additional spare gear supplied *✓*

The foregoing is a correct description.  
*Navy & Garrood*  
**ELLIOTT & GARROOD, LTD.** Manufacturer.



Dates of Survey while building

During progress of work in shops - - { 7.11.44, 21-11-44, 20-11-44, 28-11-44, 18-12-44, 8-1-45. }  
 During erection on board vessel - - - { }  
 Total No. of visits. *See Log (in shops)*

Dates of Examination of principal parts—Cylinders 28-11-44 Slides 18-12-44 Covers 28-11-44  
 Pistons 18-12-44 Piston Rods 18-12-44 Connecting rods 18-12-44  
 Crank shaft 20-11-44 Thrust shaft 20-11-44 Intermediate shafts ✓  
 Tube shaft ✓ Screw shaft 21-11-44 Propeller 21-11-44  
 Stern tube 21-11-44 Engine and boiler seatings Engines holding down bolts  
 Completion of fitting sea connections ✓  
 Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓  
 Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓  
 Crank shaft material *Steel* Identification Mark ✓ Thrust shaft material *Steel* Identification Mark ✓  
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material *Steel* Identification Mark ✓ Steam Pipes, material ✓ Test pressure ✓ Date of Test ✓  
 Is an installation fitted for burning oil fuel ✓ 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 ✓ 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. If so, state name of vessel *See Lukas yard h<sup>2</sup>182. (see 81)*

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

*The machinery has not been constructed in accordance with the requirements of the Society's Rules but has been constructed under the supervision of the Society.  
 The scantlings are in accordance with the Society's Rules.  
 The workmanship is of good description.  
 The machinery, in my opinion, will be eligible for record of L.M.C. (with date) when efficiently installed in a Classed vessel.*

*Above main engine installed in "VIC 82" at Knottingley.  
 See separate report A. W.S. Shields, Hull.*

The amount of Entry Fee	£	:	:	When applied for,
Special	£	8	0	15 JAN 1945
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	£	1	13	19

*W.S. Shields*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 1 JUN 1945*  
 Assigned *See F.C. Machy Rpt.*



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

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