

## REPORT ON OIL ENGINE MACHINERY.

No. 19904

14 OCT 1936

Date of writing Report 13<sup>th</sup> Oct 1936. When handed in at Local Office 13.10.36 Port of Grimsby.No. in Survey held at Lincoln.  
Reg. Book.Date, First Survey 17<sup>th</sup> February. Last Survey 12<sup>th</sup> Oct 1936.  
Number of Visits 45.on the <sup>Single</sup> ~~Triple~~ <sup>Double</sup> ~~Quadruple~~ Screw vessel M/V "CASTLE COMBE."Tons <sup>Gross</sup>  
<sup>Net</sup>

Built at Bristol. By whom built Chas. Hill & Sons, L<sup>d</sup>. Yard No. 251. When built 1936.  
Engines made at Lincoln. By whom made Ruston & Hornsby, L<sup>d</sup>. Engine No. 178679. When made 1936.  
Donkey Boilers made at ☒ By whom made ☒ Boiler No. ☒ When made ☒  
Brake Horse Power 525. Owners Ald. Shipping Co. L<sup>d</sup>. Port belonging to Bristol.  
Nom. Horse Power as per Rule 106.6 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒  
Trade for which vessel is intended ☒ [One Engine - Size 7 V.A.M.] ☒ Coasting.

FL ENGINES, &c. — Type of Engines ☒ Oil injection, cold starting. ☒ 2 or 4 stroke cycle ☒ 4 Single or double acting ☒ Single  
Maximum pressure in cylinders 650 lb. Diameter of cylinders 12 1/2" Length of stroke 15" No. of cylinders 7. No. of cranks 7.  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 13 7/8" Is there a bearing between each crank ☒ yes.  
Revolutions per minute 430 Flywheel dia. 4'-3" Weight 43 cwt. Means of ignition ☒ Compression Kind of fuel used ☒ Aude oil.  
Crank Shaft, dia. of journals 190 as approved. Crank pin dia. 7" Crank Webs Mid. length breadth 12" Thickness parallel to axis ☒  
as fitted 9. Mid. length thickness 3 1/16" shrunk Thickness around eye hole ☒  
Flywheel Shaft, diameter as approved. Intermediate Shafts, diameter as fitted 6 3/8" Thrust Shaft, diameter at collars as fitted 6 1/4"  
as fitted 9. as fitted 7 1/2" Is the ☒ screw shaft fitted with a continuous liner ☒ No

Tube Shaft, diameter as per Rule ☒ Screw Shaft, diameter as fitted 7 1/2" Is the ☒ screw shaft fitted with a continuous liner ☒ No  
as fitted ☒ Thickness between bushes as fitted ☒ Is the after end of the liner made watertight in the

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

shaft ☒ Yes If so, state type ☒ Forward Length of Bearing in Stern Bush next to and supporting propeller 30"  
Propeller, dia. 7'-0" Pitch 2510 mm. No. of blades 4 Material ☒ Man whether Moveable ☒ No Total Developed Surface 1.62 m<sup>2</sup> sq. feet

Method of reversing Engines ☒ Reverse gears. Is a governor or other arrangement fitted to prevent racing of the engine when declutched ☒ yes. Means of lubrication  
☒ forced. Thickness of cylinder liners 1" Are the cylinders fitted with safety valves ☒ yes. Are the exhaust pipes and silencers water cooled or lagged with  
non-conducting material ☒ water If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ☒

Cooling Water Pumps, No. one. ☒ Chas. Hill & Sons. Is sea suction provided with an efficient strainer which can be cleared within the vessel ☒ yes  
What special arrangements are made for dealing with cooling water if discharged into bilges ☒

Bilge Pumps worked from the Main Engines, No. 2 Diameter 4 3/4" Stroke 4 3/4" Can one be overhauled while the other is at work ☒ yes.  
Pumps connected to the Main Bilge Line No. and Size ☒ Four. 2-2 1/2" main eng 3 1/2" aux 2 1/2" aux. ☒ driven from 2 pumps before  
How driven ☒ Main eng plunger type ☒ aux. bilge & tank centrifugal

Ballast Pumps, No. and size ☒ 1-3 1/2" centrifugal Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 4 geared + 1 spare.  
Are two independent means arranged for circulating water through the Oil Cooler ☒ yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge  
Pumps, No. and size:—In Machinery Spaces ☒ 1-2 1/2" In Pump Room ☒

In Holds, &c. ☒ Repair & one short 2 1/2" air  
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ☒ one 3" from teller pump & one 2 1/2" from aux pump  
Are all the Bilge Suction pipes in Holds and ☒ fitted with strum-boxes ☒ yes. Are the Bilge Suctions in the Machinery Spaces

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. Are they fitted with Valves or Cocks ☒ Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform 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 ☒

What pipes pass through the bunkers ☒ None How are they protected ☒  
What pipes pass through the deep tanks ☒ None Have they been tested as per Rule ☒

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and ☒ 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 ☒ none. Is it fitted with a watertight door ☒

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ☒  
Main Air Compressors, No. one. No. of stages ☒ single Diameters 3" Stroke 3 1/2" Driven by ☒ engine  
Auxiliary Air Compressors, No. one. No. of stages ☒ two Diameters 1 1/4" + 3 1/4" Stroke 3" Driven by ☒ engine

Small Auxiliary Air Compressors, No. ☒ No. of stages ☒ Diameters ☒ Stroke ☒ Driven by ☒  
Scavenging Air Pumps, No. ☒ Diameter ☒ Stroke ☒ Driven by ☒

Auxiliary Engines crank shafts, diameter as approved. Position ☒  
as fitted 3"

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ☒ yes.  
Can the internal surfaces of the receivers be examined and cleaned ☒ yes. Is a drain fitted at the lowest part of each receiver ☒ yes.

High Pressure Air Receivers, No. ☒ Cubic capacity of each ☒ Internal diameter ☒ thickness ☒  
Seamless, lap welded or riveted longitudinal joint ☒ Material ☒ Range of tensile strength ☒ Working pressure ☒

Starting Air Receivers, No. Two Total cubic capacity 46.75 cubic feet Internal diameter 2'-6" thickness 3/8"  
Seamless, lap welded or riveted longitudinal joint ☒ seamless Material ☒ sm. steel Range of tensile strength 26/30 tons Working pressure ☒ as approved.  
Actual 300 lbs.



IS A DONKEY BOILER FITTED? /

No

If so, is a report now forwarded? /

Is the donkey boiler intended to be used for domestic purposes only /

PLANS. Are approved plans forwarded herewith for Shafting 28.2.36 + 7.5.36.  
(If not, state date of approval)

Receivers 7.11.34.

Separate Tanks / Yes

Donkey Boilers /

General Pumping Arrangements /

Yes

Oil Fuel Burning Arrangements /

### SPARE GEAR.

Has the spare gear required by the Rules been supplied yes. /

State the principal additional spare gear supplied /

Huston & Hornsby, Limited

The foregoing is a correct description.

J. L. Long

Manufacturer.

Dates of Survey while building  
During progress of work in shops - 1936 Feb 17, 24, Mar 12, 23, Apr 9, 16, 27, 30, May 4, 11, 14, 18, 28, Jun 3, 8, 11, 15, 18, 22, 25, 29, Jul 2, 6, 9, 13, 16, 20, Aug 4, 11, 14, 17, 21, 24, 28, Oct 1, 5, 7, 8, 12  
During erection on board vessel - 1936 Aug 12, 17, Sep 4, 8, 9, 7, 19, 21, 23, 28, 29, 12, 14, 16, 21, 24, 27, Nov 5, 7, 16, 19, Dec 21.  
Total No. of visits 45 + 21 = 66

Dates of Examination of principal parts - Cylinders 11.6.36. Covers 18.6.36. Pistons 18.6.36. Rods / Connecting rods 30.4.36.

Crank shaft 11.6.36. Flywheel shaft 11.6.36. Thrust shaft 21.9.36. Intermediate shafts / 12-8-36. Tube shaft /

Screw shaft / 12-8-36. Propeller + 21-9-36. Stern tube / 17-8-36. Engine seatings / 21-10-36. Engines holding down bolts / 21-10-36.

Completion of fitting sea connections / 21-9-36. Completion of pumping arrangements / 21-12-36. Engines tried under working conditions 7-11-36.

Crank shaft, Material Sm. Steel Identification Mark No 3243. Flywheel shaft, Material Sm. Steel Identification Mark No 3243.

Thrust shaft, Material Sm. Steel Identification Mark No 3243. Intermediate shafts, Material / Steel Identification Marks 12-8-36.

Tube shaft, Material / Identification Mark / Screw shaft, Material / Steel Identification Mark 12-8-36.

Is the flash point of the oil to be used over 150° F. / Yes

Have the requirements of the Rules for oil fuel pipes and tank fittings 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 /

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 workmanship + materials are good.

The engine has been built under Special Survey in accordance with the Rules + Approved plan. Running trials were carried out at the maker's works under brake load with satisfactory results.

The engine is being forwarded to Bristol where it will be fitted on board the "M/V" Castle Combe," now being built by Messrs Chas Hill + Sons, Ltd.

This engine has now been fully secured on board, according to the Rules + Approved plans. Trial under full working condition found satisfactory in my opinion for Request form attached. 0/2760/36/11.148.

The amount of Entry Fee £ 2 : - : - When applied for, 13.10.36  
Special 4/5 Grimsby £ 21 : 8 : -  
Donkey Boiler Fee £ 5 : 7 : -  
Travelling Expenses (if any) £ 2 : 0 : - 15.1.37

Committee's Minute

Assigned See Nos 13590

TUE. 4 MAY 1937

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation