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REPORT ON OIL ENGINE MACHINERY.

No. 59120

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of writing Report 3/12/1937 When handed in at Local Office 3/12/1937 Port of *Glasgow*
 in Survey held at *Glasgow* Date, First Survey 2nd April Last Survey 29th Nov. 1937
 Book. Number of Visits 29
 97 on the *Single* *Triple* *Quadruple* Screw vessel *Ailsa B. Co. Ltd. No. 434. "SAINT EUNAN"* Tons { Gross 436
 Net 190
 ilt at *TROON* By whom built *Ailsa S.B. Co. Ltd.* Yard No. 427 When built 1937
 gines made at *Glasgow* By whom made *British Auxiliary Ltd* Engine No. 267 When made 1934
 nkey Boilers made at *-* By whom made *-* Boiler No. *-* When made *-*
 ake Horse Power 640. Owners *R. HARPER & SON* Port belonging to *TROON*
 m. Horse Power as per Rule 125. Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *YES*

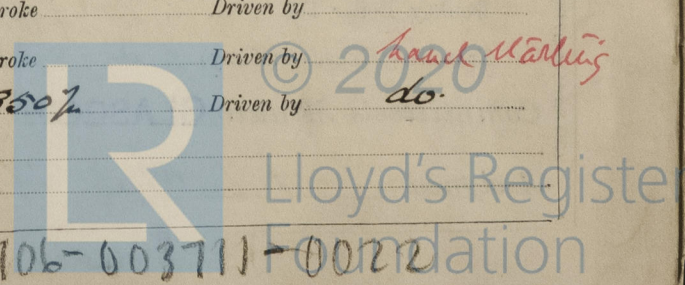
de for which vessel is intended *COASTING* 1338 2276

ENGINES, &c.—Type of Engines *Heavy oil (M.A.M. type)* 2 or 4 stroke cycle 2. Single or double acting *Single*
 imum pressure in cylinders 782 lb. Diameter of cylinders 340 1/2 Length of stroke 54 1/2 No. of cylinders 4 No. of cranks 4
 Indicated Pressure 99.5
 of bearings, adjacent to the Crank, measured from inner edge to inner edge 48 1/2 Is there a bearing between each crank *Yes*
 lutions per minute 250. Flywheel dia. 1455 1/2 Weight 4988 lb. Means of ignition *Comp.* Kind of fuel used *Diesel oil*
 ank Shaft, dia. of journals as per Rule 21 1/2 Crank pin dia. 220 1/2 Crank Webs Mid. length breadth 308 1/2 Thickness parallel to axis
 as fitted 220. Mid. length thickness 122 1/2 Thickness around eye-hole
 wheel Shaft, diameter as per Rule 21 1/2 Intermediate Shafts, diameter as per Rule 5 5/8 Thrust Shaft, diameter at collars as per Rule 14 5/8
 as fitted 260. as fitted 5 3/4 as fitted 260.
 e Shaft, diameter as per Rule *-* Screw Shaft, diameter as per Rule 6 1/4 Is the *tube* shaft fitted with a continuous liner *YES*
 as fitted *-* as fitted 6 1/2
 nze Liners, thickness in way of bushes as per Rule 4 8/4 Thickness between bushes as per rule 3 3/8 Is the after end of the liner made watertight in the
 as fitted 1 1/2 as fitted 3/8
 eller boss *YES* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *-*
 he 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 *-*
 wo 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
 t *No* If so, state type *-* Length of Bearing in Stern Bush next to and supporting propeller 2'-2" *✓*

propeller, dia. 7'-3" Pitch 4'-10" No. of blades 4 Material *Brass* whether Moveable *No* Total Developed Surface 22 sq. feet
 Method of reversing Engines *Direct* Is a governor or other arrangement fitted to prevent racing of the engine when detached *Yes* Means of lubrication
 used Thickness of cylinder liners 25.5 Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with
 conducting material *Yes* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *-*
 oling Water Pumps, No. 12 120 1/2 x 140 1/2 D.A. Is the sea suction provided with an efficient strainer which can be cleared within the vessel *YES*
 ge Pumps worked from the Main Engines, No. 1 Diameter 90 1/2 D.A. Stroke 140 1/2 Can one be overhauled while the other is at work *✓*
 mps connected to the Main Bilge Line { No. and Size *Ballast & Gen. Service 50 tons/hr.* *Gen. Service 30 tons/hr.*
 How driven *Electric Motor* *Am. Diesel Engine*
 the cooling water led to the bilges *No* If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 angements *-*

last Pumps, No. and size 12 50 tons/hr. 12 30 tons/hr. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 12 13 1/2 tons/hr. driven by *main engine*
 two independent means arranged for circulating water through the Oil Cooler *YES* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 mps, No. and size:—In Machinery Spaces 1-2" E.R. att 1-2" E.R. fwd. ord., In Pump Room *✓*
 Holds, &c. 1-2" *Hold High port: 1-2" Hold High starboard: 1-2" Hold Bilge Centre*
 ependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2 *Gen. Service Pump fwd. port: 1-2 1/2" Ballast pump E.R. att*
 e all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *YES* Are the Bilge Suctions in the Machinery Spaces
 from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *YES*
 e all Sea Connections fitted direct on the skin of the ship *YES* Are they fitted with Valves or Cocks *YES*
 e 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 *Both*
 e 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 *✓*
 hat pipes pass through the bunkers *None* How are they protected *-*
 hat pipes pass through the deep tanks *None* Have they been tested as per Rule *✓*
 e all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *YES*
 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
 npartment to another *YES* Is the Shaft Tunnel watertight *✓* Is it fitted with a watertight door *-* worked from *-*
 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. 1. No. of stages 2. Diameters 40 1/2 47 5/2 Stroke 350 1/2 Driven by *Main Eng.*
 Auxiliary Air Compressors, No. *-* No. of stages *-* Diameters *-* Stroke *-* Driven by *-*
 Small Auxiliary Air Compressors, No. *See Man. Rpt. 9027* stages *-* Diameters *-* Stroke *-* Driven by *do.*
 Scavenging Air Pumps, No. 1. Diameter 440 1/2 Stroke 350 1/2 Driven by *do.*
 Auxiliary Engines crank shafts, diameter as per Rule *See Manchester Rpt. 9027* No. *-*
 as fitted *See London Rpt. 104 622* Position *-*



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AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule. *y/s*

Can the internal surfaces of the receivers be examined and cleaned *y/s*.

Is a drain fitted at the lowest part of each receiver *y/s*.

High Pressure Air Receivers, No. *1*

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Starting Air Receivers, No. *2*

Total cubic capacity *56 ft*

Internal diameter *25 1/2*

thickness *3/16*

Seamless, lap welded or riveted longitudinal joint *Unclad*

Material *S*

Range of tensile strength *28-31 Tons*

Working pressure by Rules *392*

Actual *385*

IS A DONKEY BOILER FITTED? *No*

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

If so, is a report now forwarded? *-*

PLANS. Are approved plans forwarded herewith for Shafting *25-2-34*

(If not, state date of approval)

Receivers *25-6-34*

Separate Fuel Tanks *5-5-37*

Donkey Boilers *-*

General Pumping Arrangements *6-5-37*

Pumping Arrangements in Machinery Space *2-9-37*

Oil Fuel Burning Arrangements *-*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *y/s*

State the principal additional spare gear supplied

See attached list

The foregoing is a correct description,

BRITISH AUXILIARIES, LIMITED,

Manufacturer.

Dates of Survey while building
During progress of work in shops-- *1937 Apr: 12-27 May: 17-21 June: 2-4-9-11-15-23-25 July: 5-7-13 = 14*
During erection on board vessel-- *1937 Apr: 2-13 May: 18 Aug: 28 Sep: 6 Oct: 14-27 Nov: 5-9-11-16-23-25-26-29 = 14*
Total No. of visits *29*

Dates of Examination of principal parts—Cylinders *11-6-34* Covers *9-6-34* Pistons *15-6-34* Rods *-* Connecting rods *4-6-34*
Crank shaft *8-4-34 (FR)* Flywheel shaft *and* Thrust shaft *2-6-34* Intermediate shafts *28/8/37* Tube shaft *✓*
Screw shaft *28/8/37* Propeller *28/8/37* Stern tube *28/8/37* Engine seatings *14/11/37* Engines holding down bolts *5/11/37*
Completion of fitting sea connections *14/11/37* Completion of pumping arrangements *29/11/37* Engines tried under working conditions *29/11/37*
Crank shaft, Material *Do.* Identification Mark *9429-PK.* Flywheel shaft, Material *and* Identification Mark *Do.*
Thrust shaft, Material *Do.* Identification Mark *405-714-ERB-56* Intermediate shafts, Material *S.M. 14907 STEEL* Identification Marks *308.7 9.E.M.*
Tube shaft, Material *Do.* Identification Mark *9431-PK.* Screw shaft, Material *-do-* Identification Mark *308.8 9.E.M.*

Is the flash point of the oil to be used over 150° F. *y/s*

Have the requirements of the Rules for oil fuel pipes and tank fittings 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 *y/s* If so, state name of vessel *Plumbrope Coast. No Report 2054018*

General Remarks (State quality of workmanship, opinions as to class, &c. *This machinery, main and auxiliary, has been properly fitted on board, tested under full working conditions and found satisfactory, and, in our opinion, is eligible for record + LMC 11, 37 and TSC 11, 37.*

This machinery has been built under special survey and in accordance with the Rules the materials & workmanship are good.

The amount of Entry Fee *£ 3*
Special *£ 31*
Donkey Boiler Fee *£*
Travelling Expenses (if any) *£ 2*

When applied for, *7-DEC-1937*

When received, *13-DEC-1937*

Committee's Minute *GLASGOW 7-DEC-1937*

Assigned *7 L.M.C. 11, 37.*



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