

# REPORT ON OIL ENGINE MACHINERY.

No. 15658  
7 JAN 1935 28 FEB 1935

Received at London Office

Date of writing Report 5<sup>th</sup> Jan 1935 When handed in at Local Office 5<sup>th</sup> Jan 1935 Port of Southampton

No. in Survey held at Genil Date, First Survey 12. 11. 34 Last Survey 10. 12. 1934  
Reg. Book. Number of Visits 349 = 12. 27/2/35

on the Single Twin Triple Quadruple Screw vessel M/V SEVERN INDUSTRY Tons Gross 122.13

Built at Bristol By whom built Chas Hill & Sons' Yard No. 215 When built 1934  
Engines made at Yarnie By whom made Peters Ltd Engine No. 220780 When made 1934  
Donkey Boilers made at Yarnie By whom made Peters Ltd Boiler No. 1 When made 1934  
Brake Horse Power 120 Owners Severn & Canal Bargeing Co Ltd Port belonging to Bristol  
Nom. Horse Power as per Rule 45 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No  
Trade for which vessel is intended Severn in Bristol Channel (Limney port however)

**ENGINES, &c.** Type of Engines HEAVY OIL 2 or 4 stroke cycle 2 Single or double acting Single  
Working pressure in cylinders 650 lbs Diameter of cylinders 8" Length of stroke 11 3/4" No. of cylinders 4 No. of cranks 4  
Pitch of bearings, adjacent to the Crank, measured from inner edge to inner edge 11 3/4" Is there a bearing between each crank yes  
Revolutions per minute 450 Flywheel dia. 2'-6" Weight 1151 lbs Means of ignition Compression Kind of fuel used Heavy Oil  
Crank Shaft, dia. of journals as per Rule 4 1/2" Crank pin dia. 4 1/2" Crank Webs 6 1/4" Thickness parallel to axis shrunk  
Main Shaft, diameter as per Rule 4 1/2" Intermediate Shafts, diameter as per Rule 4 1/2" Thrust Shaft, diameter at collars as per Rule 3 1/4"  
Propeller Shaft, diameter as per Rule 4 1/2" Screw Shaft, diameter as per Rule 3 1/4" Is the shaft fitted with a continuous liner No  
Cylinder 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 stern boss Yes  
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes  
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 Yes  
If the liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes

Propeller, dia. 43" Pitch 27" No. of blades 4 Material C.I. whether Moveable No Total Developed Surface 6.66 sq. feet  
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication oil  
Cooling of cylinders Water Thickness of cylinder liners as per Rule Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with conducting material Water  
Exhaust of the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine N.R. later

Boiling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
Suction Pumps worked from the Main Engines, No. one Diameter 2 3/4" Stroke 2 1/4" Can one be overhauled while the other is at work Yes  
Pumps connected to the Main Bilge Line { No. and Size 2-2" How driven Semi Rotary & 1 off main engine  
Ballast Pumps, No. and size one Lubricating Oil Pumps, including Spare Pump, No. and size one 1 1/4" x 1" 119 gals/hr.  
Are two independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 2- in E. Room 2" dia In Pump Room 1- 2" dia in Hold

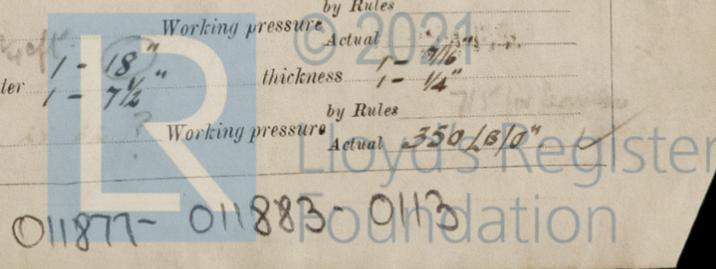
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Hand pump in bilge  
Are all the Bilge Suction pipes in Holds and Trunks fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces fitted from easily accessible mud-boxes, placed above the level of the working 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 Valves  
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 Yes  
What pipes pass through the bunkers None How are they protected Yes  
What pipes pass through the deep tanks None Have they been tested as per Rule Yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery 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 worked from  
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes

Main Air Compressors, No. one No. of stages one Diameters 3 5/8" Stroke 3 5/8" Driven by main engines  
Auxiliary Air Compressors, No. one No. of stages two Diameters 1 3/8-2 3/4" Stroke 1 5/8" Driven by Petrol  
Small Auxiliary Air Compressors, No. one No. of stages one Diameters 1 5/8" Stroke 1 5/8" Driven by Petrol  
Scavenging Air Pumps, No. one Diameter 1 1/4" Stroke 1 1/4" Driven by main engines

**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. one Cubic capacity of each 10 cu ft. rivetted Internal diameter 1-18" thickness 1-1/4"  
Seamless, lap welded or riveted longitudinal joint 10 cu ft. rivetted Material M.S. Range of tensile strength 10-10 1/2 Working pressure Actual 350/60"  
Starting Air Receivers, No. 2 Total cubic capacity 1-11 1/4 cu. ft. Internal diameter 1-7 1/2" thickness 1-1/4"  
Seamless, lap welded or riveted longitudinal joint 10 cu ft. rivetted Material M.S. Range of tensile strength 10-10 1/2 Working pressure Actual 350/60"

Im. 11.26. T.



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 15. 11. 34  
(If not, state date of approval) 16. 11. 34

Receivers No

Separate Tanks

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 Plan in Specs letter 2/1/35

The foregoing is a correct description,

Charles Hill  
For and on behalf of Patters Limited.

Drawing Office Manager.

Manufacturer.

Dates of Survey while building	{	During progress of work in shops--	<u>12/11/34, 3/12/34, 10/12/34.</u>
		During erection on board vessel--	<u>Dec 6, 8, 14, 17, 18, 27, 28, 29, 13, 27, last sunny</u>
		Total No. of visits	<u>3 + 9 = 12.</u>

Dates of Examination of principal parts—Cylinders 12. 11. 34 Covers 12. 11. 34 Pistons 12. 11. 34 Rods  Connecting rods 12. 11. 34

Crank shaft 12. 11. 34 Flywheel shaft  Thrust shaft 3. 12. 34 Intermediate shafts  Tube shaft

Screw shaft 8. 12. 34 Propeller 8. 12. 34 Stern tube 6. 12. 34 Engine seatings 6-12-34 Engines holding down bolts 17. 12. 34

Completion of fitting sea connections 12-12-34 Completion of pumping arrangements 28-12-34 Engines tried on Test bench under working conditions 10/12/34

Crank shaft, Material 3. 17. Steel Identification Mark 3430. Flywheel shaft, Material  Identification Mark 25/12/34

Thrust shaft, Material OH. / ingot Steel Identification Mark 3324 Intermediate shafts, Material  Identification Marks

Tube shaft, Material  Identification Mark  Screw shaft, Material Steel Identification Mark 8199 26-11-34

Is the flash point of the oil to be used over 150° F.  AIR RECEIVERS C7705 760 LBS CT+C 405448 HYB

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with  NP 407 23-10-34 HMC 800 LBS 13-12-34 JP NP 407 LBS.

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 yes If so, state name of vessel Chas. Hill's No 205.

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

The machinery of this vessel has been constructed under special survey according to the Rules and approved plans and the materials and workmanship are sound and good.

The machinery will be eligible for the notation +L.M.C. with date when it has been efficiently installed on board, tried under working conditions and found satisfactory.

This machinery has now been fitted & secured on board according to the rules, tried under working conditions & found satisfactory.

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

The amount of Entry Fee	£ 2 : 0	When applied for,	<u>5/11 19.36</u>
Special <u>4/5</u>	£ 12 : 0		
Donkey Boiler Fee	£ 3 : 0		
Travelling Expenses (if any)	£ 3 : 14	When received,	<u>23/11 19.35</u> <u>(217.14)</u>

L.R. Home  
G. Champness  
& John W. Goyne  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 5 MAR 1935  
Assigned to Lmb 2.35 oil. Eng.

