

# REPORT ON OIL ENGINE MACHINERY.

12 DEC 1930

Received at London Office

Date of writing Report 11th Dec 1930 When handed in at Local Office 11th Dec 1930 Port of Dundee

No. in Survey held at Dundee Date, First Survey 6th Aug 1930 Last Survey 5th Dec 1930  
Reg. Book. Number of Visits 23

on the Single Twin Triple Quadruple Screw vessel M.V. "SKOTAS" Tons Gross Net  
Built at Dundee By whom built Lealson & Co. Ltd Yard No. 335 When built 1930  
Engines made at Gotaverken By whom made Gotaverken Engine No. When made  
Donkey Boilers made at Dundee By whom made Lealson & Co. Ltd Boiler No. 536 When made 1930  
Brake Horse Power 3900 Owners Not known Port belonging to Not known  
Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted  
Trade for which vessel is intended Carrying Petroleum in Bulk

**OIL ENGINES, &c.**—Type of Engines 2 or 4 stroke cycle 4 Single or double acting Single  
Maximum pressure in cylinders ✓ Diameter of cylinders ✓ Length of stroke ✓ No. of cylinders ✓ No. of cranks ✓  
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank  
Revolutions per minute ✓ Flywheel dia. ✓ Weight ✓ Means of ignition ✓ Kind of fuel used ✓  
Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. ✓ Crank Webs Mid. length breadth Mid. length thickness shrunk Thickness parallel to axis Thickness around eye-hole  
Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted  
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner ✓  
Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule 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 If so, state type Length of Bearing in Stern Bush near to and supporting propeller  
Propeller, dia. ✓ Pitch ✓ No. of blades ✓ Material ✓ whether Moveable ✓ Total Developed Surface ✓ sq. feet  
Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication  
Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material 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. ✓ Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓  
Bilge Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
Pumps connected to the Main Bilge Line No. and Size 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, No. and size:—In Machinery Spaces ✓ In Pump Room ✓  
In Holds, &c. ✓  
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 Spaces 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 Both  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line Yes  
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 Yes  
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  
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. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓  
Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓  
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 per Rule as fitted No. ✓ Position ✓

**AIR RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓  
Can the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver  
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 by Rules Actual  
Starting Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓  
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual



IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*

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

PLANS. Are approved plans forwarded herewith for Shafting  Receivers  Separate Tanks   
(If not, state date of approval)

Donkey Boilers *Yes* General Pumping Arrangements  Oil Fuel Burning 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.

THE CALEDONIAN BOILER & ENGINEERING CO. LD

*J. G. G. G.* Manufacturer.

Dates of Survey while building

During progress of work in shops -- During erection on board vessel -- Total No. of visits	{	1930. Aug. - 6. Sept. - 19, 20, 24. Oct. - 4, 11, 21. Nov. - 4, 24, 28.
		1930. Oct. - 27, 23, 24, 21. Nov. - 6, 19, 20, 21, 24, 25, 28. Dec. - 14, 5.
		<b>23</b>

Dates of Examination of principal parts--Cylinders <input checked="" type="checkbox"/>	Covers <input checked="" type="checkbox"/>	Pistons <input checked="" type="checkbox"/>	Rods <input checked="" type="checkbox"/>	Connecting rods <input checked="" type="checkbox"/>
Crank shaft <input checked="" type="checkbox"/>	Flywheel shaft <input checked="" type="checkbox"/>	Thrust shaft <input checked="" type="checkbox"/>	Intermediate shafts <input checked="" type="checkbox"/>	Tube shaft <input checked="" type="checkbox"/>
Screw shaft <input checked="" type="checkbox"/>	Propeller <input checked="" type="checkbox"/>	Stern tube <input checked="" type="checkbox"/>	Engine seatings <b>5. 11. 30.</b>	Engines holding down bolts <input checked="" type="checkbox"/>
Completion of fitting sea connections <b>31. 10. 30.</b>	Completion of pumping arrangements <input checked="" type="checkbox"/>	Engines tried under working conditions <input checked="" type="checkbox"/>		
Crank shaft, Material <input checked="" type="checkbox"/>	Identification Mark <input checked="" type="checkbox"/>	Flywheel shaft, Material <input checked="" type="checkbox"/>	Identification Mark <input checked="" type="checkbox"/>	
Thrust shaft, Material <input checked="" type="checkbox"/>	Identification Mark <input checked="" type="checkbox"/>	Intermediate shafts, Material <input checked="" type="checkbox"/>	Identification Marks <input checked="" type="checkbox"/>	
Tube shaft, Material <input checked="" type="checkbox"/>	Identification Mark <input checked="" type="checkbox"/>	Screw shaft, Material <input checked="" type="checkbox"/>	Identification Mark <input checked="" type="checkbox"/>	

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

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  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 **"Hoona" (Bureau Report No 8438)**

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

*The machinery, as under, of this vessel has been constructed under Special Survey in accordance with the approved plans & the Rules of this Society, the materials & workmanship are good. The Donkey Boilers have been satisfactorily fitted on board the vessel, the safety valves adjusted under steam & tried for accumulation. The boilers examined under working conditions found satisfactory. The cargo heating pipes in all cargo tanks, End Dup Tank, Side Bunker Tanks & Aft Peak, tested by hydraulic pressure. The bunker oil transfer pipes on deck, & pump room tested by hydraulic pressure. The sea connection end found satisfactory. The work is eligible in my opinion to have the record of L.M.C. when the survey is complete.*

The amount of Entry Fee ... £	:	:	When applied for,	19
Special ... .. £	:	:	When received,	19
Donkey Boiler Fee ... £	:	:		
Travelling Expenses (if any) £	:	:		

*W. H. Copeman*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 24 APR 1931**

Assigned **+ L.M.C. 3,31 C.L.**

*Oil Eng. 2 DB. 150 lb.*

CERTIFICATE WRITTEN



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