

REPORT ON OIL ENGINE MACHINERY.

No. 1026.

14 APR 1931

Date of writing Report *9th April, 1931* When handed in at Local Office *11th April, 1931* Port of *Mahmō*
No. in Survey held at *Mahmō* Date, First Survey *17th July, 1930* Last Survey *4th April, 1931*
Reg. Book. *Single* Number of Visits *25*

90524 on the *Single* *Twin* *Triple* *Quadruple* Screw vessel *"FALKEFJELL"* Tons { Gross *7227*
Net *4603*

Built at *Mahmō* By whom built *Hockmrs M. V. A.-B.* Yard No. *168* When built *1931*
Engines made at *Mahmō* By whom made *Hockmrs M. V. A.-B.* Engine No. *3464* When made *1931*
Donkey Boilers made at *Stockton* By whom made *Riley Bros.* Boiler No. *0201* When made *1930*
Brake Horse Power *2 x 1725 = 3450* Owners *Aktins. Falkefjell* Port belonging to *Oslo*
Nom. Horse Power as per Rule *778* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*
Trade for which vessel is intended *✓*

OIL ENGINES, &c. Type of Engines *Hockmrs MAN K. 8V. 59/100* 2 or 4 stroke cycle *4* Single or double acting *Single*
Maximum pressure in cylinders *35 kg/cm²* Diameter of cylinders *22 7/16"* Length of stroke *39 3/8"* No. of cylinders *2 x 8 = 16* No. of cranks *2 x 8 = 16*
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *770 mm* Is there a bearing between each crank *Yes*
Revolutions per minute *140* Flywheel dia. *2093 mm* Weight *5000 kg* Means of ignition *Spark* Kind of fuel used *Heavy oil*
Crank Shaft, dia. of journals *355 mm* as per Rule *360* " as fitted *360* " Crank pin dia. *360 mm* Crank Webs *237.4 mm* Mid. length breadth *225 mm* Thickness parallel to axis *159.5*
Flywheel Shaft, diameter *360-252* " as per Rule *360* " as fitted *360* " Intermediate Shafts, diameter *240* " as per Rule *240* " as fitted *240* " Thrust Shaft, diameter at collars *249.3* " as per Rule *252* " as fitted *252* "
Tube Shaft, diameter *262.4 mm* as per Rule *265* " as fitted *265* " Is the *tube* *screw* shaft fitted with a continuous liner *Yes*
Screw Shaft, diameter *15.5 mm* as per Rule *18 & 16* " as fitted *18 & 16* " Thickness between bushes *12 mm* as per rule *12* " as fitted *12* " Is the after end of the liner made watertight in the propeller boss *Yes* 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 *No* Length of Bearing in Stern Bush next to and supporting propeller *1250 mm*

Propeller, dia. *3565 mm* Pitch *2835 mm* No. of blades *3* Material *Brass* whether Moveable *No* Total Developed Surface *84.4* sq. feet

Method of reversing Engines *MAN* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Means of lubrication *Forced.* Thickness of cylinder liners *Top 42 mm Bottom 32 mm* Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *lagged* If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *led to funnel*

Cooling Water Pumps, No. *2* (each of 190 T/hour) Is the sea suction provided with an efficient strainer which can be cleared within the vessel *Yes*

Bilge Pumps worked from the Main Engines, No. *1* In Diameter *2-6" x 9"* Stroke *20 T/hour* Can one be overhauled while the other is at work *Yes* In Pump Room Fwd. *One - 6" x 8" x 6" - 50 T/hour. One - 6" x 6" x 6" - 30 T/hour.*

Pumps connected to the Main Bilge Line { How driven *Electric motors* *Steam driven* *Steam driven*

Ballast Pumps, No. and size *1 - Rotary 100 T/hour* Lubricating Oil Pumps, including Spare Pump, No. and size *2 each of 70 m³/hour.*

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 *3-3 1/2" 1-4" in after cofferdam. 3-3 1/2" in main pump room. 1-3 1/2" in pump room fwd.*

In Holds, &c. *2-3 1/2" in dry cargo hold. 1-3 1/2" in forward cofferdam.*

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *1-5"*

Are all the Bilge Suction pipes in Holds and Tunnel Well 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 *Valves*

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates *Yes or by lifting* 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 *✓* How are they protected *✓*

What pipes pass through the deep tanks *Suction pipe from after cofferdam* Have they been tested as per Rule *Yes*

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings 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 *No tunnel* 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. *2* No. of stages *3* Diameters *570-510-120 mm* Stroke *460 mm* Driven by *Main engine*

Auxiliary Air Compressors, No. *1* No. of stages *3* Diameters *380-340-75 mm* Stroke *250 mm* Driven by *Electric motor*

Small Auxiliary Air Compressors, No. *1* No. of stages *2* Diameters *8 mm* Stroke *8 m³/hour* Driven by *Steam engine*

Scavenging Air Pumps, No. *1* Diameter *139 mm* Stroke *155* " Driven by *✓*

Auxiliary Engines crank shafts, diameter *as per Rule 139 mm as fitted 155* " *LLOYDS NO. 3293-576/577 H.S. 8.8.30* *Mahmō*

IR 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 *Yes* What means are provided for cleaning their inner surfaces *Injection air receivers by means of soda and steam*

Is there a drain arrangement fitted at the lowest part of each receiver *Yes*

High Pressure Air Receivers, No. *3* Cubic capacity of each *2 of 200 L* Internal diameter *448 mm* thickness *24 mm*

Seamless, lap welded or riveted longitudinal joint *Lap welded* Material *Steel* Range of tensile strength *37.4 kg/mm²* Working pressure by Rules *7.5 kg/cm²*

Starting Air Receivers, No. *1* Total cubic capacity *25 m³* Internal diameter *2004 mm* thickness *27 mm*

Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *44-50 kg/mm²* Working pressure by Rules *25 kg/cm²*

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