

REPORT ON OIL ENGINE MACHINERY.

No. 8463.

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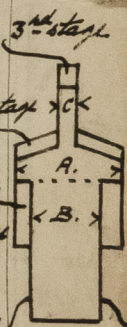
-1 APR 1931

Date of writing Report 23rd March 1930 When handed in at Local Office 25th March 1930 Port of Copenhagen
No. in Survey held at Copenhagen Date, First Survey 16th June 1930 Last Survey 18th March 1931
Reg. Book. 90698 on the Single Motor "GARONNE" Tons: Gross 7112.72
Twins Screw vessel Net 4210.82
Built at Copenhagen By whom built akt. Burmeister & Wain's Maskin og Skibsbyggeri. Yard No. 594 When built 1930-31
Engines made at Copenhagen By whom made akt. Burmeister & Wain's Maskin og Skibsbyggeri. Engine No. 1927 When made 1930-31
Donkey Boilers made at Copenhagen By whom made akt. Burmeister & Wain's Maskin og Skibsbyggeri. Boiler No. 1844 When made 1930
Brake Horse Power 3000 Owners Dampskibsselskabet Garonne Port belonging to Oslo
Nom. Horse Power as per Rule 625 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
Trade for which vessel is intended Ocean trade, carrying petroleum in bulk.

OIL ENGINES, &c.—Type of Engines Vertical Diesel Engines, trunk piston type, air injection 2 or 4 stroke cycle 4 Single or double acting Single
Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 590 mm = 23 1/4" Length of stroke 100 mm = 4 3/8" No. of cylinders 2 x 6 No. of cranks 2 x 6
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 820 mm Is there a bearing between each crank yes
Revolutions per minute 140 Wheel dia. 1652 mm Weight 1050 kg Means of ignition Air compression Kind of fuel used Crude oil flash point above 150°F.
Crank Shafts dia. of journals as per Rule 369 mm Crank pin dia. 372 mm Crank Webs Mid. length breadth 600 mm shrunk Thickness parallel to axis 250 mm
Central hole 115 mm as fitted 372 mm Central hole 115 mm Mid. length thickness 230 mm Thickness around eyehole 164 mm
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 9.87" Thrust Shafts diameter at collars as per Rule 10.31"
Tube Shaft, diameter as per Rule Screw Shafts diameter as per Rule 10.82" Is the tube shaft fitted with a continuous liner yes
Bronze Liners, thickness in way of bushes as per Rule 0.74" Thickness between bushes as per rule 0.55" 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 Liners in one length
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 two 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 shaft no If so, state type yes
Length of Bearing in Stern Bush next to and supporting propeller 6'-2"
Propeller, dia. 11'-9" Pitch 9'-6" No. of blades 3 off Material Brass whether Moveable no Total Developed Surface 33 sq. feet
Method of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when decelerated yes Means of lubrication oil
Thickness of cylinder liners 43 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 the funnel
Cooling Water Pumps, No. 2 off Centrifugal pumps 150 tons each the sea suction provided with an efficient strainer which can be cleared within the vessel yes
Bilge Pumps worked from the Main Engines, No. engine Diameter of trunk 160 mm Stroke 206 mm Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line No. and size 1 off ballast pump 100 tons. 2 off bilge & sanitary pumps 26 tons each. 2 off engine bilge & sanitary pumps 35 tons each.
How driven by electric motor by electric motor by the main engines
Ballast Pumps, No. and size 1 off vertical duplex piston pump 100 tons Lubricating Oil Pumps, including Spare Pump, No. and size 2 off, log wheel pumps, 60 tons each.
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 off 4" diam & 2 off 3" diam. In A.P.T. 1 off 3" diam. In aftermost cofferdam 2 off 3" diam to injectors in Pump Room 1 off 3" diam.
In Holds, 1 off 3" diam. In fore hold 2 off 3" diam. In forward pump room 2 off 3" diam. In forward cofferdam 1 off 3" diam, all connected to the pump fitted in the forward pump room
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 off 5" diam and 2 off 3" diam
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 except the donkey boiler blow off cock.
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 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 shaft tunnel Is it fitted with a watertight door yes worked from yes
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. 2 off No. of stages 3 Diameters 600-540-120 mm Stroke 410 mm Driven by the main engines
Auxiliary Air Compressors, No. 2 off No. of stages 3 Diameters 320-280-70 mm Stroke 170 mm Driven by the auxiliary engines
Small Auxiliary Air Compressors, No. 1 off No. of stages 2 Diameters 90-35 mm Stroke 120 mm Driven by hand
Scavenging Air Pumps, No. yes Diameter yes Stroke yes Driven by yes
Auxiliary Engines crank shafts, diameter as per Rule 161.8 mm Auxiliary engines 2 off two cyl. 4 B.C.S.A. Diesel oil engines 100 BHP each. Cyl diam 310 mm Stroke 350 mm
as fitted 170.0 mm each working a 60 K.W. generator Position In the machinery space, Port and Starboard

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. 2 off No. of stages 3 Internal diameter 21 mm thickness 3/8"
Seamless, lap welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 27.5-31.7 tons/sq. in Working pressure Actual 65 ATM
Starting Air Receivers, No. 1 off Total cubic capacity 900 cubic feet Internal diameter 8'-0" and 6'-1 1/8" thickness 1 1/8"
Seamless, lap welded or riveted longitudinal joint double butt straps Material S.M. Steel Range of tensile strength 27.5-27.7 tons/sq. in Working pressure Actual 25 ATM



IS A DONKEY BOILER FITTED?

Yes, 2 off

If so, is a report now forwarded?

Yes

Is the donkey boiler intended to be used for domestic purposes only *to be used for dealing with the oil cargo pumps, the bilge pump in the pump room, the bilge and ballast pump in the forward pump room and for the circulating pump to the auxiliary condenser etc.*

PLANS. Are approved plans forwarded herewith for Shafting

Yes. *Antique Receivers*

Yes

Separate Tanks

Yes

Donkey Boilers

Yes

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

No

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

The spare gear supplied as per accompanying list.

List of plans forwarded per commercial papers post:-

- 1 off - Crank shaft for the main engines. - 1 off - Thrust, Intermediate and Screw shafts.
 1 " - Crank shaft for the auxiliary engines.
 1 " - Starting air receiver. - 1 off - Daily service oil fuel tanks.
 1 " - General pumping arrangement and oil cargo pumping arrangement.
 1 " - Corrected plan of pumping arrangement in the forward pump room.
 2 " - Pumping arrangement in machinery space and corrected plan of same.
 1 " - Electric lighting and power installation.
 1 " - Donkey Boilers.
 1 " - Oil fuel settling tank for the oil burning arrangement to the donkey boilers.

The foregoing is a correct description.

AKTIESELSKABET

BURMEISTER & WAINSKIN - OG SKIBSBYGGERI

Manufacturer.

Dates of Survey while building	During progress of work in shops -	June 16, 24, 26, July 1, 2, 12, 15, 16, 17, 22, 23, 24, 25, 26, Aug 1, 2, 4, 5, 6, 7, 9, 16, 19, 20, 21, 22, 23, 25, 26, 27, 30, Sept 1, 3, 4, 6, 8, 9, 10, 12, 15, 16, 17, 19, 22, 23, 25, 26, 30.
	During erection on board vessel -	Oct 2, 3, 7, 8, 9, 10, 13, 14, 16, 17, 20, 21, 22, 23, 24, 27, 29, 31, Dec 1, 3, 4, 7, 12, 13, 14, 17, 19, 20, 21, 22, 24, 25, 27, 28, 29, Feb 2, 3, 5, 6, 9, 11, 12, 15, 17, 18, 20, 23, 31, - 1930
		Jan 3, 5, 7, 8, 10, 14, 15, 16, 17, 19, 22, 23, 27, 29, 30, Feb 2, 4, 6, 7, 9, 10, 11, 13, 17, 18, 19, 20, 24, - March 6, 7, 10, 18, - 1931.
	Total No. of visits	127.
Dates of Examination of principal parts—Cylinders	22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 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