

REPORT ON OIL ENGINE MACHINERY.

No. 10765.

Date of writing Report 16 June 1936 When handed in at Local Office 19 June 1936 Port of Gothenburg
No. in Survey held at Gothenburg Date, First Survey 21 June 1935 Last Survey 4 June 1936
Reg. Book. Supplement 38798 on the Twin Screw vessel "KOLLGRIM" Number of Visits 72

Built at Gothenburg By whom built ERICSSBERGS M.V. AKTIEB Yard No. 262 When built 1936-6
Engines made at Gothenburg By whom made ERICSSBERGS M.V. AKTIEB Engine No. 153 When made 1936
Donkey Boilers made at Gothenburg By whom made ERICSSBERGS M.V. AKTIEB Boiler No. 527 When made 1936
Brake Horse Power 3450 Owners ODD BERGS TANKREDERI A/S Port belonging to OSLO
Nom. Horse Power as per Rule 644 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended General

L ENGINES, &c. Type of Engines One Diesel Oil Engine 2 or 4 stroke cycle 2 Single or double acting Double
Maximum pressure in cylinders 49 kg/cm² Diameter of cylinders 450 mm [17 1/4"] Length of stroke 1200 mm [47 1/4"] No. of cylinders 6 No. of cranks 6
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 840 mm Is there a bearing between each crank Yes
Revolutions per minute 115 Wheel dia. 1902 mm Weight 1570 kg Means of ignition Diesel syst Kind of fuel used Diesel Oil
Crank Shaft, dia. of journals as per Rule 360 mm as fitted 360 mm Crank pin dia. 360 mm Crank Webs Mid. length breadth 204-224 mm Thickness parallel to axis 175 mm
Intermediate Shafts, diameter as per Rule 340-413 mm as fitted 340-413 mm Thrust Shaft, diameter at collars as per Rule 420 mm as fitted 420 mm
Tube Shaft, diameter as per Rule 1936 mm as fitted 1936 mm Screw Shaft, diameter as per Rule 480 mm as fitted 480 mm

Bronze Liners, thickness in way of bushes as per Rule 91 mm as fitted 91 mm Thickness between bushes as per Rule 22 mm as fitted 22 mm 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 Liner 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 Yes If so, state type Vickers "Vitta" gland Length of Bearing in Stern Bush part to and supporting propeller 2180 mm
Propeller, dia. 5029 mm Pitch 3200 mm No. of blades 4 Material Bronze whether Movable No Total Developed Surface 8.067 [86.8 sq. feet]

Method of reversing Engines Reversible Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
Inced Thickness of cylinder liners 34 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 stern, what means are arranged to prevent water from being syphoned back to the engine Yes
Cooling Water Pumps, No. 2 salt water pumps 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. None Diameter Stroke Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and Size One pump 28 mm dia. 150 mm stroke The ballast pump 150 mm dia. 150 mm stroke
How driven Electric Electric
Ballast Pumps, No. and size One, 150 tons/hour Lubricating Oil Pumps, including Spare Pump, No. and size Two, 2340 litres/minute
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 Four 3 1/2" In Pump Room None

In Hold, &c. None (Two 2 1/2" to hold, One 2 1/2" in forward pump room and two 4" in main pump room from separate steam driven pumps)
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 3 1/2" to each bilge pump & one 5" to ballast pump
Are all the Bilge Suction Pipes in Holds &c. 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 Yes
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 No bunkers How are they protected
What pipes pass through the deep tanks Cargo pipes and heating coils Have they been tested as per Rule Yes agling Diesel oil engine
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. None No. of stages 2 Diameters 250-280 mm Stroke 190 mm Driven by Auxiliary engines
Auxiliary Air Compressors, No. 2 of these No. of stages 2 Diameters 178 x 334 mm Stroke 314 mm Driven by Main engine
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 150 mm Stroke 150 mm Driven by Main engine
Scavenging Air Pumps, No. 2 scavenging pumps Diameter 150 mm Stroke 150 mm Driven by Main engine
Auxiliary Engines crank shafts, diameter 150 mm Position — Machinery space

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. None Cubic capacity of each Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure
Starting Air Receivers, No. 2 Total cubic capacity 2 x 8 = 16 cub. met. Internal diameter 1600 mm Thickness 22.5 mm
Seamless, lap welded or riveted longitudinal joint Riveted Material Range of tensile strength 37.6-55.1 kg/mm² Working pressure 25.2 kg/cm²

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IS A DONKEY BOILER FITTED?

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 6
 (If not, state date of approval)
 Donkey Boilers 6 11/2/95

Donkey Boilers ~~16~~ 11/3/35

General Pumping Arrangements

Receivers *to*. 82/19/3/35

Separate Tanks No. 19/3/35

Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

For the main engine.

1 exhaust top piston-valve with rings, 1 exhaust bottom piston-valve with rings, parts of the piston-valve gear, 4 halves of crosshead brasses, 2 halves of crank pin brasses, 2 halves of main bearing brasses, 1 propeller shaft, 1 cast iron propeller.

For the auxiliary engines:

1 bush for gudgeon pin, 2 halves of crank pin brasses, 2 halves of main bearing brasses, 2 halves of compressor crank pin brasses, spare parts of the cam shaft drive.

The foregoing is a correct description,
Eriksbergs Mek. Verkstads Aktiebolag
Samuel J.

Manufacturer.

Dates of Survey while building	During progress of work in shops-- During erection on board vessel-- Total No. of visits	1935: Jan. 21, July 22, 29, Aug. 9, 16, Sept. 3, 18, 30, Oct. 15, 29, 30, Nov. 9, 15, 15, 20, 21, 26, 29, Dec. 3, 4, 6, 10, 11, 17, 31 1936: Jan. 8, 9, 11, 13, 15, 17, 25, 27, 29, 30, Feb. 3, 8, 15, 21, 24, 25, 27, March 9, 11, 16, 17, 20, 23, 27, 30, April 8, 20, 28, May 7, 19, 22,
		1936: March 10, 23, 30, April 6, 28, May 5, 12, 16, 23, 25, 27, 30, June 2, 3, 4.
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Dates of Examination of principal parts—Cylinders ~~examined~~ 27-29/1/36, 3/2/36 Pistons 15/1/36 Rods 15/1/36 Connecting rods 29/10/35
Crank shaft 29/1/35 Flywheel shaft ✓ Thrust shaft 9/1/36 Intermediate shafts 9/1/36 Tube shaft ✓
Screw shaft 20/1/36 Propeller 20/1/36 16/5/36 15/1/36 22/1/36

Screw shaft 20/1/36 Propeller 20/1/36 16 1/2 Stern tube 15/1/36 Thrust shaft 9/1/36 Intermediate shafts 9/1/36 Tube shaft ✓
Completion of fitting sea connections 10/3/36 Engine seatings 23/3/36 Engines holding down bolts 30/3/36
Crank shaft, Material 4H steel Identification Mark 4405PSR15965 Completion of pumping arrangements 25/5/36 30/5/36 Engines tried under working conditions 4/6/36

Crank shaft, Material <u>St. Steel</u>	Identification Mark <u>LLOYD'S 15965</u>	Completion of pumping arrangements <u>1/5/36</u>	Engines tried under working conditions <u>4/6/36</u>
Thrust shaft, Material <u>St. Steel</u>	Identification Mark <u>LLOYD'S 9242</u>	Flywheel shaft, Material <u>St. Steel</u>	Identification Mark <u>S.R. 9.1.36</u>
Tube shaft, Material <u>St. Steel</u>	Identification Mark <u>S.R. 9.1.36</u>	Intermediate shafts, Material <u>St. Steel</u>	Identification Marks <u>LLOYD'S 15966</u>

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

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

Screw shaft, Material *M. Steel*

Identification Mark *LLOYDS N. 2639-92*
BR. 20.1.36

Identification marks on aux. eng. crank shafts *yes*

LLOYDS N. 2689-
BR. 3.7.35

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo ☒ *Yes*

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ☒ If so, have the requirements of the Rules been complied with ☒

Is this vessel ☐ *No*

Is this machinery duplicate of a previous case No If so, state name of vessel ✓

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

have been built under special survey and the requirements of the Rules have been complied with. The shafting as per forging reports attached.

The workmanship is good and the material fulfils the requirements of the Rules.

The dimensions are as specified, in accordance with the Rules and approved plans.

The auxiliary machinery consists of 2, 2 cylinder, 2 stroke cycle, single acting Diesel oil engines of cylinder diam 220^{mm} and stroke 370^{mm} manufactured by *Leipziger*

working a dynamo of 82 Kw. The main & auxiliary engines

working conditions on a trial trip and found work satisfactory.

of them on a trial trip and found work satisfactory.

The machinery of this vessel is eligible in my opinion. I have

the Register Book of this Society with notation of 4/4C 6.36. [Working pressure of 100 lbs.]

he amount of Entry Fee .. *Rs 109:20* : When applied for, *20th June 1936*
Special ... *Rs 1958:86* : *20th June 1936*

Special ... *Ac 1958:86* : *20 June 1936*
~~Starting air rec.~~
~~Donkey Boiler Fee~~ ... *Ac 159:88* :
 Travelling Expenses/G ...
 When received.
G. Mander
 Engineer Surveyor to Lloyd's Register

Travelling Expenses (if any) £ : 30.7 1936 31/7

When received, 31/7

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 8 III 1936

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