

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office SEP 27 1938

Date of writing Report 9th Sept. 1938 When handed in at Local Office 19 Port of Oslo
 No. in Survey held at Fredrikstad Date, First Survey 4th January 1938 Last Survey 6th September 1938
 Reg. Book. 88765 on the Steel single screw steamer - K.G. MELDAHL (Number of Visits 3799)
 Built at Fredrikstad By whom built M/S Fredrikstad Mek. Verksted Yard No. 289 Tons Gross 3799 Net 2194
 Engines made at Fredrikstad By whom made M/S Fredrikstad Mek. Verksted Engine No. 1094 When made 1938
 Boilers made at Fredrikstad By whom made M/S Fredrikstad Mek. Verksted Boiler No. 1350/51 When made 1938
 Registered Horse Power 2100 Owners L. K. Rasmussens Rederi A/S Port belonging to Sandefjord
 Nom. Horse Power as per Rule 353 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which Vessel is intended general

ENGINES, &c.—Description of Engines 4 cyl. inverted double compound Revs. per minutab. 100
 Dia. of Cylinders Two 425 - two 1015 mm Length of Stroke 930 mm No. of Cylinders four No. of Cranks four
 Crank shaft, dia. of journals as per Rule 311.49 Crank pin dia. 318 mm Crank webs Mid. length breadth 530 mm No. of Cranks four Thickness parallel to axis 198 mm
 as fitted 315 Mid. length thickness 198 shrunk Thickness around eye-hole 146
 Intermediate Shafts, diameter as per Rule 296.6 mm Thrust shaft, diameter at collars as per Rule 311.49 mm
 as fitted 298.0 as fitted 315
 Tube Shafts, diameter as per Rule 344.3 mm Screw Shaft, diameter as per Rule 346 Is the tube } shaft fitted with a continuous liner } yes
 as fitted 346 Is the screw }
 Bronze Liners, thickness in way of bushes as per Rule 18.4 mm Thickness between bushes as per Rule 13.8 mm Is the after end of the liner made watertight in the propeller boss yes
 as fitted 18.5 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 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 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
 Propeller, dia. 4500 mm Pitch 3880 mm No. of Blades 4 Material Mang. bronze whether Movable no Total Developed Surface 72.6 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 100 mm Stroke 100 mm Can one be overhauled while the other is at work yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 100 mm Stroke 100 mm Can one be overhauled while the other is at work yes
 Feed Pumps { No. and size Two 240 x 175 x 530 mm 30 ltr/low Pumps connected to the { No. and size one 6 x 8 x 6 }
 { How driven steam, simplex Main Bilge Line { How driven steam, duplex }
 Ballast Pumps, No. and size one 10" x 13" x 10", duplex Lubricating Oil Pumps, including Spare Pump, No. and size 1
 Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine Room Two 50. 2 1/2", one Port 2 1/2"
 In Pump Room yes In Holds, &c. Fore hold:—Two 3 1/4", main hold: two 3", deep tank two 2 1/2". Cofferdams: one from each 2", after hold: two 3 1/2", two 3", tunnel well one 3".
 Main Water Circulating Pump Direct Bilge Suctions, No. and size one 7 7/8" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one 1 1/2"
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes
 Are the Bilge Suctions in the Machinery Space 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 + cocks
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold 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 yes How are they protected yes
 What pipes pass through the deep tanks bilge pipes to No 1 main hold 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 yes Is it fitted with a watertight door yes worked from pedal etc.

MAIN BOILERS, &c.—(Letter for record 10/7/38) Total Heating Surface of Boilers 512 m² (5510 ft²)
 Is Forced Draft fitted yes No. and Description of Boilers Two cylindrical Scotch boilers Working Pressure 15.5 kg/cm²
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes
 IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? yes
 Is the donkey boiler intended to be used for domestic purposes only yes

PLANS. Are approved plans forwarded herewith for Shafting 9/3/37 Main Boilers 10/7/37 Auxiliary Boilers yes Donkey Boilers yes
 Superheaters 10/4/37 General Pumping Arrangements 16/4/37 Oil fuel Burning Piping Arrangements 4/10/37

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied Tail shaft, HP piston rod, Valve spindle, 1 extra top end bearing, 8 boiler tubes, 12 condenser tubes with ferrules, 1 eccentric strap, 10 water gauge glasses, 1 piston valve for fan engine, circulating pump & dynamo engine.

The foregoing is a correct description,
 by FREDRIKSTAD MEK. VERKSTED

Manufacturer.



U/46-0128

If not, state whether, and when, one will be sent

1938
 Dates of Survey while building
 During progress of work in shops -- 4/1 - 13/1 - 24/1 - 2/2 - 11/2 - 22/2 - 25/2 - 2/3 - 11/3 - 16/3 - 21/3 - 29/3 - 6/4 - 15/4 -
 20/4 - 25/4 - 29/4 - 2/5 - 24/6 - 28/6 - 9/7
 During erection on board vessel --- 2/8 - 9/8 - 16/8 - 27/8 - 2/9 - 5/9 - 6/9
 Total No. of visits 28

Dates of Examination of principal parts—Cylinders 16/3 - 25/4 - 29/4 Slides 21/3 - 25/4 - 29/4 Covers 25/4 - 29/4
 Pistons 25/4 - 29/4 - 2/5 Piston Rods 29/4 - 2/5 Connecting rods 29/4 - 2/5
 Crank shaft 6/4 - 20/4 Thrust shaft 6/4 - 20/4 Intermediate shafts 4/1 - 13/1 - 21/1 - 6/4 - 2/5 - 24/6
 Tube shaft ✓ Screw shaft 4/1 - 13/1 - 16/3 - 21/3 - 2/5 - 24/6 Propellers 9/5/38
 Stern tube 24/6 - 28/6 - 9/7 Engine and boiler seatings 28/6 - 9/7 Engines holding down bolts 2/8 - 9/8
 Completion of fitting sea connections 9/7/38
 Completion of pumping arrangements 27/8/38 Boilers fixed 16/8/38 Engines tried under steam 2/9 - 6/9
 Main boiler safety valves adjusted 6/9/38 Thickness of adjusting washers ✓
 Crank shaft material S.M. steel Identification Mark Lloyd's N° 5378 Thrust shaft material S.M. steel Identification Mark 2 Lloyd's 289.7
 Intermediate shafts, material S.M. steel Identification Marks 2 Lloyd's 289.3-6 F.M.V. Spare screw 2 Lloyd's 289.2
 2 Lloyd's 289.1 Tube shaft, material S.M. steel Identification Mark F.M.V. 24.6.38 P.E.
 Screw shaft, material S.M. steel Identification Mark F.M.V. 24.6.38 Steam Pipes, material S.M. seamless steel Test pressure 46.5 kg/cm² Date of Test 9/8/38
 Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes
 Have the requirements of the Rules for the use of oil as fuel been complied with Yes
 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 Yes
 Is this machinery duplicate of a previous case Yes If so, state name of vessel S.S. "VIVA", yard N° 287

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This machinery has been constructed in accordance with the approved plans and in accordance with the Secretary's letters concerning the vessel. All materials were required by the Rules have been tested by the Society's Surveyors. The main engine cylinders were tested by hydraulic pressure. All steam & feed piping, superheater pipes & headers, oil fuel piping and heating coils in the d. b. tanks have been tested as per Rules. The pumping arrangements have been carried out & fitted as approved. Feed heaters & filters were tested as required by the Rules. The large pipes passing through the deep tanks have been tested as per Rules. The oil fuel settling tanks & coils in same were tested on completion. The workmanship throughout is good.
 The machinery was examined under working conditions during dock trials and during a 6-8 hours' trial trip.
 Fozging and casting reports are enclosed herewith.

It is recommended that this vessel's machinery be classed in the Society's Register Book, with notation **LMC 9.38**. Fitted for oil fuel 9.38. F.P. above 150° F.

Certificates to be sent to this office. The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 99.50: When applied for, 22/9/1938
 Special ... £ 1551.20:
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : : 30.9.38 20
 entered on hull rpt. 30/9

Alfred Perforches
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 30 SEP 1938**
 Assigned **+ LMC 9.38**
Fitted for oil fuel 9.38 F.P. above 150°F
 Sp. F.D. CL.

