

## 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

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)

Gross 3799

Tons Net 2194

Built at Fredrikstad By whom built M/S Fredrikstad Mek. Verksted

Yard No. 289

When built 1938-9

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 *R 491" 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* Thickness parallel to axis *198 mm*

Intermediate Shafts, diameter *as per Rule 296.6 mm* Thrust shaft, diameter at collars *as per Rule 311.49 mm*

Tube Shafts, diameter *as per Rule 344.3 mm* Screw Shaft, diameter *as per Rule 346 mm* Is the tube shaft fitted with a continuous liner? *yes*

Bronze Liners, thickness in way of bushes *as per Rule 18.4 mm* Thickness between bushes *as per Rule 15 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 *78.6 sq. feet*

Feed Pumps worked from the Main Engines, No. *✓* Diameter *✓* Stroke *✓* Can one be overhauled while the other is at work? *✓*

Bilge Pumps worked from the Main Engines, No. *✓* Diameter *✓* Stroke *✓* Can one be overhauled while the other is at work? *✓*

Feed Pumps { No. and size *Two, 240 x 175 x 530 mm, 30 ltr./hour* 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 12" x 10", duplex* 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;—In Engine Room *Two SB. 2 1/2", one Port 2 1/2"*

In Pump Room *✓* In Holds, &c. *Fore hold:—Two 3 1/4", main hold: two 3", deep tank, two 2 1/2". Copper dams: 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? *How are they protected?* *✓*

What pipes pass through the deep tanks? *Edge 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 10/7/37) Total Heating Surface of Boilers *512 m<sup>2</sup> (5510 ft<sup>2</sup>)*

Is Forced Draft fitted? *yes* No. and Description of Boilers *Two cylindrical Scotch boilers* Working Pressure *15.5 kg./cm<sup>2</sup>*

IS A REPORT ON MAIN BOILERS NOW FORWARDED? *yes*

IS A DONKEY BOILER FITTED? *no* If so, is a report now forwarded? *✓*

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

**PLANS.** Are approved plans forwarded herewith for Shafting 9/3/37 Main Boilers 10/7/37 Auxiliary Boilers *✓* Donkey Boilers *✓*

(If not state date of approval)

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.



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Lloyd's Register Foundation

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1938 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-  
During progress of work in shops - - 20/4-25/4-29/4-2/5-24/6-28/6-9/7  
Dates of Survey while building 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 4.11.27.6513/4 Thrust shaft material S.M. steel Identification Mark 2 Lloyd's 289.7  
Intermediate shafts, material S.M. steel Identification Marks 289.3-6 F.M.V. 24.6.38 P.E. Test shaft, material S.M. steel Identification Mark 2 Lloyd's 289.2  
Screw shaft, material S.M. steel Identification Mark F.M.V. 24.6.38 P.E. Steam Pipes, material S.M. seamless steel Test pressure 46.5 kg/cm<sup>2</sup> 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.  
Forging 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.

Certificate 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 ... £11 1551.20: When received, 30.9.38  
Donkey Boiler Fee ... £: :  
Travelling Expenses (if any) £: :  
entered on hull rpt. 30/9

Committee's Minute FRI 30 SEP 1938

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

Assigned + LMC. 9.38  
Fitted for oil fuel 9.38 F.P. above 150°F  
Spd. F.D. CL.