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# REPORT ON OIL ENGINE MACHINERY.

No. 418



Report 18th Sept. 1951 When handed in at Local Office 18th Sept. 1951 Port of KIEL  
Survey held at KIEL Date, First Survey 7th July Last Survey 3rd October 1951  
Number of Visits 6  
Single on the Twin Triple Quadruple Screw vessel M.T. ISEBEK  
By whom built KREMER SOHN Yard No. 1001/2 When built 1951  
By whom made Maschinenbau Kiel Aktiengesellschaft Engine No. 15167 When made 1951  
By whom made - Boiler No. - When made -  
Owners - Port belonging to -  
Horsepower 520 Is Refrigerating Machinery fitted for cargo purposes. - Is Electric Light fitted -  
Year as per Rule 105

INES, &c. —Type of Engines. MAN 423 2 or 4 stroke cycle 4 Single or double acting S.A.  
Pressure in cylinders 4.8 kg/cm<sup>2</sup> Diameter of cylinders 290 mm Length of stroke 169 mm No. of cylinders 8 No. of cranks 8  
Rated Pressure 6.5 kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1-7-4-6-8-2-5-3 Span of bearings, adjacent to the crank, measured edge to inner edge 344 mm Is there a bearing between each crank yes Revolutions per minute 375  
Weight 2200 kg Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) 193000 Kg. cm.<sup>2</sup> Means of ignition comp. Kind of fuel used Diesel  
Dia. of journals as per Rule - as fitted 180 mm Crank pin dia. 180 mm Crank webs Mid. length breadth 250 mm Thickness parallel to axis -  
Shaft, diameter as per Rule - as fitted 180 mm Intermediate Shafts, diameter as per Rule - as fitted - Thrust Shaft, diameter at collars as per Rule -  
Screw Shaft, diameter as per Rule - as fitted - Is the tube screw shaft fitted with a continuous liner -  
Thickness in way of bushes as per Rule - Thickness between bushes as per Rule - Is the after end of the liner made watertight in the ss. -  
If the liner is in more than one length are the junctions made by fusion through the whole thickness of 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-  
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  
If so, state type. - Length of bearing in Stern Bush next to and supporting propeller. -  
Pitch 2300 mm No. of blades - Material - whether moveable - Total developed surface - sq. feet  
Inertia of propeller (lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) - Kind of damper, if fitted friction  
Reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of  
Thickness of cylinder liners - Are the cylinders fitted with safety valves yes Are the exhaust manifolds pipes and silencers water cooled  
non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
Cooling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel. -  
worked from the Main Engines, No. one Diameter 90 mm Stroke 115 mm Can one be overhauled while the other is at work. -  
ected to the Main Bilge Line No. and size - How driven -  
water led to the bilges. - If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 - 7.61/8.6 m<sup>3</sup>/Hr.  
Suctions, connected to both main bilge pumps and auxiliary  
No. and size: - In machinery spaces - In pump room -

Power Pump Direct Suctions to the engine room bilges, No. and size -  
ge suction pipes in holds and tunnel well fitted with strum-boxes. - Are the bilge suction in the machinery spaces led from easily  
L-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. -  
Connections fitted direct on the skin of the Ship. - Are they fitted with valves or cocks. - Are they fixed  
on the ship's side to be seen without lifting the platform plates. - Are the overboard discharges above or below the deep water line  
fitted with a discharge valve always accessible on the plating of the vessel. - Are the blow off cocks fitted with a spigot and brass covering plate.  
ass through the bunkers. - How are they protected. -  
ass through the deep tanks. - Have they been tested as per Rule. -

cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times. -  
ment 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  
one compartment to another. - Is the shaft tunnel watertight. - Is it fitted with a watertight door. - worked from -  
l, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork. -  
Compressors, No. - No. of stages 2 diameters 120/108 stroke 70 mm driven by M.E.  
Air Compressors, No. - No. of stages - diameters - stroke - driven by -  
is made for first charging the air receivers. -  
Pumps, No. - diameter - stroke - driven by -  
ines crank shafts, diameter as per Rule - as fitted - Position -  
ary engines been constructed under special survey. - Is a report sent herewith. -

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Lloyd's Register  
Foundation



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AIR RECEIVERS:—Have they been made under survey..... State No. of report or certificate.....

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....

Can the internal surfaces of the receivers be examined and cleaned..... Is a drain fitted at the lowest part of each receiver.....

Injection Air Receivers, No..... Cubic capacity of each..... Internal diameter..... thickness.....

Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

Starting Air Receivers, No..... Total cubic capacity..... Internal diameter..... thickness.....

Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

IS A DONKEY BOILER FITTED..... 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..... 5th September, 1950..... Receivers..... Separate fuel.....

Donkey boilers..... General pumping arrangements..... Pumping arrangements in machinery space.....

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved..... yes, provisionally..... Date of approval..... 24/4/1951.....

### SPARE GEAR.

Has the spare gear required by the Rules been supplied..... to be checked on board.....

State the principal additional spare gear supplied..... 1 additional cylinder cover.....

The foregoing is a correct description, and the particulars of the installation as built are as approved for vibration characteristics..... Manufacturer.....

Dates of Survey while building..... During progress of work in shops - - - 7th & 19th July, 6th August, 1st and 3rd Sept. 3rd October 1950.....

During erection on board vessel - - -.....

Total No. of visits..... 6.....

Dates of examination of principal parts—Cylinders..... 7.19/7/51..... Covers..... 7.7.51..... Pistons..... 19.7.51..... Rods..... Connecting rod.....

Crank shaft..... 7/7 & 19/7/51..... Flywheel shaft..... Thrust shaft..... Intermediate shafts..... Tube shaft.....

Screw shaft..... Propeller..... Stern tube..... Engine seatings..... Engine holding down bolts.....

Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working conditions.....

Crank shaft, material..... S.M. steel..... Identification mark..... Flywheel shaft, material..... Identification mark.....

Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification marks.....

Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....

Identification marks on air receivers.....

" " " Cylinder Block.....

Welded receivers, state Makers' Name.....

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.....

Description of fire extinguishing apparatus fitted.....

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... 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..... notation required.....

Is this machinery duplicate of a previous case..... see Kiel Rpt. 419..... If so, state name of vessel.....

General Remarks (State quality of workmanship, opinions as to class, &c..... This engine has been constructed under Special.....

in accordance with the Rules, the Secretary's letters and approved plans, and tried under working conditions.....

Makers' test bed with satisfactory results. The materials and workmanship are good. When satisfactorily.....

in a classed vessel and tried under full power working conditions in conjunction with the elastic coupling.....

gear box to the satisfaction of the Surveyors, the engine will be eligible, in my opinion, to be classed with.....

notation + IMC (with date), provided a notice board be fitted and the tachometer be suitably marked in respect.....

barred range of speed for continuous running.....

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