

REPORT ON OIL ENGINE MACHINERY.

No. 19384

Received at London Office

Date of writing Report 15th March 1954 When handed in at Local Office 19 Port of Amsterdam 3- APR 1954

No. in Reg. Book. 9936 on the Survey held at Amsterdam Date, First Survey 17th Nov. 1953 Last Survey 21st Jan. 1954 Number of Visits 4

Single Screw vessel M/V "FAK-FAK" in "PLYM" Gross 74 Tons Net 45

Built at PORT KEMBLA NSW By whom built A.E. GOODWIN LD. Yard No. When built 1948

Engines made at Amsterdam By whom made Messrs. Kromhout Engine No. 3784/5 When made 1954

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power { Maximum Service 2 x 80 Owners Neth. New Guinea Petroleum Co Port belonging to ROTTERDAM THE HAGUE

M.N. as per Rule 32 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended FOR COASTING SERVICE INDONESIAN ARCHIPELAGO

OIL ENGINES, &c. - Type of Engines Heavy Oil, S.C.S.K. 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 108 mm Length of stroke 152.4 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 77 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 121 mm Is there a bearing between each crank yes Revolutions per minute { Maximum Service 1000 propeller 1000

Flywheel dia. 660 mm Weight 275 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) Means of ignition Comp. Kind of fuel used Diesel

Crank Shaft, { Solid forged Semi built All built } dia. of journals as per Rule 21.5 mm as fitted 21.5 mm Crank pin dia. 73.02 mm Crank webs Mid. length breadth 109.6 mm Mid. length thickness 26.13 mm Thickness parallel to axis Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule 49.6 mm as fitted 49.6 mm Thrust Shaft, diameter at collars as per Rule 21.5 mm as fitted 21.5 mm

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the { tube screw } shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the liner made watertight in the propeller boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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-erosive

If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland fitted at the after end of stern tube If so, state type Length of bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet

Moment of inertia of propeller including entrained water (lbs. in² or Kg. cm²) Kind of damper, if fitted

Method of reversing Engines Gear Is governor or other arrangement fitted to prevent racing of the engine Means of lubrication

Thickness of safety valves 75 mm Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled lagged with non-conducting material

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Cooling Water Pumps, No. and how driven 1 ME driven gear type Working F.W.

Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. and capacity Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line (No. and capacity of each) How driven

Is the cooling 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 arrangements

Ballast Pumps, No. and capacity ME Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1-gear type 1.7 T/h

Are two independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions

and size: - In machinery spaces In pump room

Overboard discharges, &c.

Direct Bilge Suctions to the engine room bilges, No. and size

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction 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

Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed

sufficiently high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line

Are they each 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

Are all pipes pass through the bunkers How are they protected

Are all pipes pass through the deep tanks Have they been tested as per Rule

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the arrangements 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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Are all Air Compressors, No. No. of stages diameters stroke driven by

Are all Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Is provision made for first charging the air receivers

Are all Air Pumps or Blowers, No. How driven Engine Nos. Position of each in engine room Report No.

Are all Auxiliary Engines Have they been made under survey Makers name



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AIR RECEIVERS: — Have they been made under survey State No. of report or certificate _____
 State full details of safety devices
 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 31-12-53 Receiver Separate fuel tanks
 (If not, state date of approval)
 Donkey boilers General pumping arrangements Pumping arrangements in machinery space
 Oil fuel burning arrangements

Have Torsional Vibration characteristics been approved Date and particulars of approval 8-3-54. In the event of a new propeller being fitted full particulars will be stated.
SPARE GEAR. The number of spares to be stated

Are the spare gear required by the Rules been supplied State if for "short voyages" only
 State the principal additional spare gear supplied

The foregoing is a correct description, **KNOXHOLT MUIRHEAD FABRIK** Manufacturer.

Dates of Survey while building
 During progress of work in shops 1953: 17/11 - 20/11 - 1954: 14/1 - 21/1
 During erection on board vessel
 Total No. of visits

Date of examination of principal parts
 Cylinders 17-11-53 Covers 17-11-53 Pistons 20-11-53 Rods Connecting rods 20-11-53
 Crank shaft 20-11-53 Flywheel shaft Thrust shaft Intermediate shafts Tube shaft
 Screw shaft Propeller Stern tube Engine seatings Engine holding down belts
 Completion of fitting of connections Completion of pumping arrangements Engines tried under working conditions 14/21-54
 Crank shaft material **SAE steel** Identification mark **HA 20-11-53** 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

Welded receivers, state Makers' Name
 Is the flash point of the oil to be used over 150°F
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with
 Full description of fire extinguishing apparatus fitted in machinery spaces
 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
 What is the special notation desired
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with
 Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c)
 These engines have been built under special survey in accordance with approved plans, Society Rules and Secretary's letters. All materials have been tested as required and the workmanship found good. After completion the engines have been tried on makers testbed under full load conditions and found working satisfactorily.
 The engines have been shipped to Sorong (New Guinea)
 Copy certificate of crankshafts attached hereto

The amount of Entry Fee ... fl. 225.50.
 Special ... £
 Donkey Boiler Fee ... £
 Travelling Expenses (if any) fl. 3-
 When applied for 31-3-1954
 When received 10
 Engineer Survey to Lloyd's Register of Shipping

[Signature]
 Lloyd's Register Foundation

Contributions (if required) to be sent to the Registrar of Shipping, Lloyd's Register of Shipping, 25 Abchurch Lane, London, E.C. 4