

REPORT ON OIL ENGINE MACHINERY.

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Date of writing Report 6th June, 1952. When handed in at Local Office 11th June, 1952. Port of M. A. L. M. Ö

No. in Survey held at Malmö Date, First Survey 12.10.51 Last Survey 30th May, 1952. Number of Visits 91.

Reg. Book. 41109s on the Twin Triple Quadruple Screw vessel M/T "SOYA-MARGARETA"

Will at Malmö By whom built Kockums Mek. Verkstads A.-B. Yard No. 343 When built 1952.

Engines made at Malmö By whom made Kockums Mek. Verkstads A.-B. Engine No. 620 When made 1952.

Monkey Boilers made at Wallsend-on-Tyne By whom made Wallsend Shipway & Eng. Co. Ltd. Boiler No. 438 B When made 1951.

Indicated Horse Power 6000 Owners Rederi A.-B. Soya Port belonging to Stockholm

N. Power as per Rule 1686 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended.

L. ENGINES, &c.—Type of Engines Kockum-MAN-D6 Z 72/120 2 or 4 stroke cycle two Single or double acting Double

Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 720 mm Length of stroke 1200 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 5.25 kg/cm² Ahead Firing Order in Cylinders 1b, 4t, 3t, 6b, 2b, 5t Span of bearings, adjacent to the crank, measured from inner edge to inner edge 1110 mm Is there a bearing between each crank yes Revolutions per minute 110

Flywheel dia. 2682 mm Weight 7700 kg Moment of inertia of flywheel (16 lbs. in² or Kg.cm.²) 111504.10³ Means of ignition Compr. Kind of fuel used Heavy Oil

Crankshaft, dia. of journals as apprx. 500 mm Crank pin dia. 500 mm Crank webs Mid. length breadth 800 mm Thickness parallel to axis 320 mm

Flywheel Shaft, diameter as apprx. 500-414 mm Intermediate Shafts, diameter as apprx. 394 mm Thrust Shaft, diameter at collars as fitted 414 mm

Tube Shaft, diameter as per Rule 438 mm Is the (tube screw) shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as apprx. 21.5 mm Thickness between bushes as apprx. 16.5 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 -

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 - 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 end of tube shaft no If so, state type - Length of bearing in Stern Bush next to and supporting propeller 1843 mm

Propeller, dia. 5460 mm Pitch 4360/3830 No. of blades 4 Material bronze whether moveable no Total developed surface 9.81 sq. mtr.

Moment of inertia of propeller (16 lbs. in² or Kg.cm.²) 174996.10³ Kind of damper, if fitted -

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication Forced Thickness of cylinder liners 45 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled lagged with non-conducting material lagged 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. 2 SW à 300 m³/h, 2 FN à 250 m³/h. 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 two; 100 and 70 mtr³/h. How driven one electr., one by steam.

Is the cooling water led to the bilges no 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 size 1- 100 m³/h. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 à 180 m³/h.

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary pumps, No. and size:—In machinery spaces 3-3½; DB coff. aft -1-2"; Main aft cofferdam 2-4". In pump room fwd. -1-3½; from cargo holds, &c. 2-3½"; Main fwd coff. -2-3½"; 2nd Pump R -2-3½"; Main Pump R -2-3½".

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2-5"

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

Are all Sea Connections fitted direct on the skin of the Ship boxes. Are they fitted with valves or cocks yes Are they fixed efficiently high on the ship's side to be seen without lifting the platform plates covered 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

Do all pipes pass through the bunkers Suction from aft cofferdam. How are they protected -

Do all pipes pass through the deep tanks none 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 - 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 - diameters - stroke - driven by -

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 300-110 mm stroke 240 mm driven by Aux. Eng.

Small Auxiliary Air Compressors, No. 1 diameters No. 84737 stroke 8.1 m at 550 Revs. driven by steam

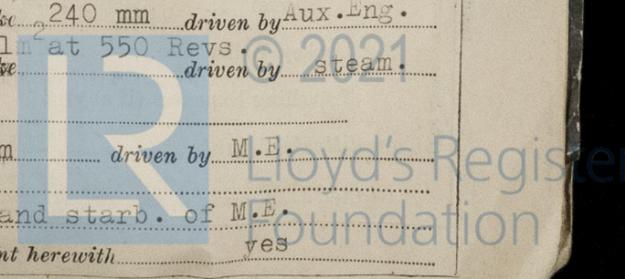
Is provision made for first charging the air receivers steam driven air compressor

Scavenging Air Pumps, No. 2 diameter 1650 mm stroke 910 mm driven by M.E.

Auxiliary Engines crank shafts, diameter as per Rule 170 mm No. two Position Port and starb. of M.E.

Have the auxiliary engines been constructed under special survey yes Is a report sent herewith yes

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AIR RECEIVERS:—Have they been made under survey... yes... State No. of report or certificate...
 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...
 Spare Injection Air Receivers, No. 1... Cubic capacity of each 200 ltr. Internal diameter 474 mm thickness 13 mm
 Seamless, welded or riveted longitudinal joint El. welded Material S.M. Steel Range of tensile strength 47.4 - 47.9 Working pressure by Rules... Actual 30 kg/cm²

Starting Air Receivers, No. 2... Total cubic capacity 20.4 m³ Internal diameter 1590 mm thickness 30 mm
 Seamless, welded or riveted longitudinal joint El. welded Material S.M. Steel Range of tensile strength 43.9 - 47.5 Working pressure by Rules... Actual 30 kg/cm²
IS A DONKEY BOILER FITTED yes, two If so, is a report now forwarded... yes
 Is the donkey boiler intended to be used for domestic purposes only... no
PLANS. Are approved plans forwarded herewith for shafting... 5.7.51 Receivers 27.2.51 Separate fuel tanks...
 Donkey boilers... General pumping arrangements... 7.9.51 Pumping arrangements in machinery space... 7.9.51
 Oil fuel burning arrangements... 7.9.51
 Have Torsional Vibration characteristics been approved... yes Date of approval... 5.7.51

SPARE GEAR.

Has the spare gear required by the Rules been supplied... yes
 State the principal additional spare gear supplied. 1 set of cylinder covers, 1 cylinder liner, 1 piston and 1 connecting rod.

The foregoing is a correct description of the machinery...
KOCKUMS
 Manufacturer.

Dates of Survey while building	During progress of work in shops - -	12/9, 26/10, 15/11, 20/11, 22/11, 26/11, 29/11, 30/11, 4/12, 6/12, 7/12, 8/12, 11/12, 12/12, 13/12, 14/12, 15/12, 20/12, 22/12, 28/12-51, 7/1, 8/1, 9/1, 10/1, 11/1, 15/1, 16/1, 18/1, 19/1, 21/1, 22/1, 23/1, 24/1, 28/1, 31/1, 4/2, 5/2, 7/2, 8/2, 15/2, 16/2, 18/2, 20/2, 25/2, 27/2, 28/2, 3/3, 4/3, 5/3, 6/3, 8/3, 10/3, 11/3, 13/3, 14/3, 15/3, 18/3, 19/3, 20, 21, 22, 24, 26, 27, 29, 31
	During erection on board vessel - - -	12, 16, 17, 19, 22, 26, 4, 9, 10, 12, 13, 14, 17, 19/5, 20, 21, 23, 24, 28, 29, 30/5, 1, 3, 5, 8, 10/4-52
	Total No. of visits	91
	Dates of examination of principal parts—Cylinders	30.11-13.12.51
	Covers	9.1-21.1.52
	Pistons	7, 8.1.52
	Rods	20.12.51
	Connecting rods	9.1.52
	Crank shaft	25.2.52
	Flywheel shaft	20.11.51
	Thrust shaft	6.3.52
	Intermediate shafts	6.3.52
	Tube shaft	-
	Screw shaft	27.2.52
	Propeller	6.3.52
	Stern tube	27.2.52
	Engine seatings	6.3.52
	Engine holding down bolts	23.4.52
	Completion of fitting sea connections	11.3.52
	Completion of pumping arrangements	14.5.52
	Engines tried under working conditions	30.5.52
	Crank shaft, material	S.M. Steel Lloyd's No. 7737/8/9
	Identification mark	423.8.51
	Flywheel shaft, material	S.M. Steel Lloyd's No. 825 AB
	Identification mark	20.11.51
	Thrust shaft, material	S.M. Steel Lloyd's No. 3391 AC
	Identification mark	6.3.52
	Intermediate shafts, material	S.M. Steel Lloyd's No. 826 AB
	Identification marks	6.3.52
	Tube shaft, material	-
	Identification mark	-
	Screw shaft, material	S.M. Steel Lloyd's No. 2270/1
	Identification mark	13.6.9.51
	Identification marks on air receivers	Starting receives - Nos. 119 and 120; Lloyd's test 48.5 kg/cm ² ; W.P. 30 kg/cm ² ; T.O. 21.3.52. Spare receiver (200ltr)-No. 111; Lloyd's test 60 kg/cm ² ; W.P. 30 kg/cm ² ; T.O. 8.8.51
	Welded receivers, state Makers' Name	Messrs. A.-B. Landsverk, Landskrona

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... yes
 Description of fire extinguishing apparatus fitted. Steam smothering under D.B. and 6 "Skum Kustos"
 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... -
 Is this machinery duplicate of a previous case... yes If so, state name of vessel... M/T "AVANCE"

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The Machinery of this vessel has been built under Special Survey in accordance with Rules and approved plans. The workmanship is good and the material comply with Rule requirements.
 Forging reports for shafting and other parts are attached.
 It is submitted the Machinery of this vessel is eligible to be classed with the record of *LMC 5.52
 Working pressure of the Donkey boilers is 180 lbs.

Test & insp. of cond. water heater, 6 pumps.
 The amount of Entry Fee... £. : 400:-
 Special ... £. : 6800:-
 Donkey Boiler Fee... £. : -
 Travelling Expenses (if any) £. : -

When applied for 11th June 19 52.
 When received 19...
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute... TUES. 8 JUL 1952
 Assigned... + LMC 5.52 Oil Eng. C.L. 2DB 180lb

Surveyors' Office, Mahoro

Certificate (if required) to be sent to... (The Surveyors are requested not to write on or below the space for Committee's Minute.)

