Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 133898

Received at London Office 13 OCT 1956 12 JUL 1956

Date of writing Report 9th JUNE, 1956 When handed in at Local Office 4th July 1956 Port of LONDON.

No. in Reg. Book. Survey held at STAMFORD, LINCS. Date, First Survey 5.4.56. Last Survey 30th MAY 1956. Number of Visits 2.

Single / on the Twin / Triple / Quadruple Screw vessel "ESSO SALTEND" Tons Gross 916 Net

Built at THORNE, DONCASTER. By whom built MESSRS RICHARD DUNSTON, LTD. Yard No. 515. When built

Engines made at STAMFORD, LINCS By whom made " " BLACKSTONE & Coy. LTD. Engine No. M67364 When made 1956.

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

Brake Horse Power (162) 180 Owners Port belonging to

M.N. Power as per Rule 32.1. Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines LISTER-BLACKSTONE EVMGR4 VERTICAL DIESEL OIL. 2 or 4 stroke cycle 4. Single or double acting SINGLE

Maximum pressure in cylinders 800 p.s.i. Diameter of cylinders 8 3/4" Length of stroke 11 1/2" No. of cylinders 4. No. of cranks 4.

Mean Indicated Pressure 97 p.s.i. Ahead Firing Order in Cylinders 1~2~4~3. Span of bearings, adjacent to the crank, measured from inner edge to inner edge 10 1/16" Is there a bearing between each crank YES. Revolutions per minute 600 / 305 r.p.m.

Flywheel dia. 40" Weight 2180 LBS. Moment of inertia of flywheel ~~(lbs. in² or Kg.cm.²)~~ GΔ² TONS FT² 6.98. Means of ignition COMPN. Kind of fuel used DIESEL.

Crank Shaft, Solid forged / ~~Semi-built~~ / ~~All-built~~ dia. of journals as per Rule / as fitted 6 3/4" Crank pin dia. 6 1/8" Crank webs Mid. length breadth 7 3/4" Mid. length thickness 2 25/32" shrunk Thickness parallel to axis Thickness around eyehole

Flywheel Shaft, diameter as per Rule / as fitted Intermediate Shafts, diameter as per Rule / as fitted Thrust Shaft, diameter at collars as fitted / as per Rule

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 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 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 (lbs. in² or Kg.cm.²) Kind of damper, if fitted VISCOUS DAMPER IN FLYWHEEL COUPLING.

Method of reversing Engines GEARBOX. Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES. Means of lubrication FORCED Thickness of cylinder liners 19/32" Are the cylinders fitted with safety valves YES. Are the exhaust pipes and silencers water cooled or 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. 2. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

Pumps connected to the Main Bilge Line: No. and size / 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 size Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 ~ PRESSURE – 810 G.P.HR / 1 ~ SCAVENGE – 1160 G.P.HR.

Are two independent means arranged for circulating water through the Oil Cooler YES. Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces In pump room

In holds, &c.

Independent Power Pump Direct 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 suctions 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

What pipes pass through the bunkers How are they protected

What 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

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 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. No. of stages diameters stroke driven by

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

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

What provision is made for first charging the air receivers

Scavenging Air Pumps, No. diameter stroke driven by

Auxiliary Engines crank shafts, diameter as per Rule / as fitted No. Position

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

© 2021 Lloyd's Register Foundation

0127E01/24-0187

AIR RECEIVERS:—Have they been made under survey YES. State No. of report or certificate C26461; C26462; C26467

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.

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

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

Starting Air Receivers, No. 3. Total cubic capacity 15 cu ft. Internal diameter 17¼" thickness ⅞"

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

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 CRANKSHAFT 12:12:53. Receivers ..... 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 YES. Date of approval 17 (7): 12:55.

Accessible gear hammer at sea trials to be reported.

SPARE GEAR.

Has the spare gear required by the Rules been supplied .....

State the principal additional spare gear supplied .....

The foregoing is a correct description,

B. Tulloch. for. BLACKSTONE & CO. LTD. Manufacturer.

Dates of Survey while building		
	During progress of work in shops	5:4:56. 30:5:56.
	During erection on board vessel	
	Total No. of visits	

Dates of examination of principal parts—Cylinders 30:4:56. Covers 30:4:56. Pistons 30:4:56 Rods ~~30:4:56~~ Connecting rods 30:4:56.

Crank shaft 30:4:56. 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 Siemens Steel Identification mark B.3684 HH. J.7285 SHF. 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 Nos 4675; 4676; ATR. 8:5:56. AND 4686 HG. 10:5:56.

Welded receivers, state Makers' Name J. & H. McLAREN LTD, LEEDS.

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 .....

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 .....

Is this machinery duplicate of a previous case ..... If so, state name of vessel .....

General Remarks (State quality of workmanship, opinions as to class, &c. This engine has been built under Works Order No 15244, under special survey in accordance with approved plans, and Rules of the Society, from materials manufactured under the Supervision of Surveyors to the Society.

WORKMANSHIP is good throughout. EXPLOSION RELIEF DEVICES are fitted to Rules.

TEST BED TRIALS, coupled to a dynamometer through GEARBOX No 11925, TYPE MW, SIZE 3R, manufactured by Hindmarsh/MWD, 4 hours duration, ahead, astern, governor & overspeed trip, carried out with satisfactory results. The engine is eligible, in my opinion, to be fitted to a classed vessel.

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

Certificate (if required) to be sent to .....

The amount of Entry Fee ...	... £ 14 : 10. :	When applied for 19	
Special	... £ : :		
Donkey Boiler Fee...	... £ : :	When received 19	
Travelling Expenses (if any)	£ 4 : 10. :		

29 JUL 1956

W. Waddle

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUESDAY 13 NOV 1956

Assigned +LMC 9.56

© 2021 Lloyd's Register Foundation