4b.

REPORT ON OIL ENGINE MACHINERY.

No. 18270

Received at London Office 22 MAY 1952 11 NOV 1952

of writing Report 16 May 1952 When handed in at Local Office ..... 19 Port of Amsterdam

in Survey held at Amsterdam Date, First Survey 24th Jan 1951 Last Survey 15th May 1952
Book. Number of Visits 18

on the Single / ~~Twin~~ / ~~Triple~~ / ~~Quadruple~~ Screw vessel "M.S. BETTET" Tons Gross ..... Net .....

lt at Vlieddrecht By whom built Yard "De Hoop" Yard No 182 When built 1952

ines made at Amsterdam By whom made Werkspoor N.V. Engine No 1333 When made 1952

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

ke Horse Power 430 Owners ..... Port belonging to .....

. Power as per Rule 86 Is Refrigerating Machinery fitted for cargo purposes ..... Is Electric Light fitted .....

de for which vessel is intended .....

ENGINES, &c.—Type of Engines T.M.A.S 276 2 or 4 stroke cycle 4 Single or double acting Single

imum pressure in cylinders 50 kg/cm² Diameter of cylinders 270 mm Length of stroke 500 mm No. of cylinders 6 No. of cranks 6

n Indicated Pressure 7.5 kg/cm² Ahead Firing Order in Cylinders 1-3-5-6-4-2 Span of bearings, adjacent to the crank, measured

n inner edge to inner edge 320 mm Is there a bearing between each crank Yes Revolutions per minute 375

wheel dia 1130 mm Weight 1250 kg Moment of inertia of flywheel (lbs. in² or Kg.cm.²) 2576 Means of ignition Comp. Kind of fuel used Diesel oil

nk / ft, Solid forged / ~~Semi built~~ / ~~All built~~ dia. of journals as per Rule ..... as fitted 200 mm Crank pin dia 200 mm Crank webs Mid. length breadth 340 mm Mid. length thickness 82 mm shrunk Thickness parallel to axis ..... Thickness around eyehole .....

wheel Shaft, diameter as per Rule ..... as fitted ..... Intermediate Shafts, diameter as per Rule ..... as fitted 190 mm Thrust Shaft, diameter at collars as fitted ..... as per Rule 145 mm

e Shaft, diameter as per Rule ..... as fitted ..... Screw Shaft, diameter as per Rule ..... as fitted 177.5 mm Is the tube / screw shaft fitted with a continuous liner Yes

nze Liners, thickness in way of bushes as per Rule ..... as fitted 14 mm Thickness between bushes as per Rule ..... as fitted 11 mm Is the after end of the liner made watertight in the

peller boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length

he 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-

rosive — 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

of tube shaft — If so, state type — Length of bearing in Stern Bush next to and supporting propeller 800 mm

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

ent of inertia of propeller (lbs. in² or Kg.cm.²) ..... Kind of damper, if fitted .....

hod of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of

cation faced Thickness of cylinder liners 21 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

gged with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

to the engine — Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel .....

e Pumps worked from the Main Engines, No. 1 Diameter 130 mm Stroke 75 mm Can one be overhauled while the other is at work .....

ps connected to the Main Bilge Line { No. and size ..... How driven .....

e 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

ngements .....

ast Pumps, No. and size ..... Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 a 4.5 t.p.h.

two independent means arranged for circulating water through the Oil Cooler ..... Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size:—In machinery spaces ..... In pump room .....

olds, &c. .....

epende nt Power Pump Direct Suctions to the engine room bilges, No. and size .....

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

ssible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges .....

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

ciently 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 .....

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 .....

t pipes pass through the bunkers ..... How are they protected .....

t pipes pass through the deep tanks ..... Have they been tested as per Rule .....

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

e 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

es, or from one compartment to another ..... Is the shaft tunnel watertight ..... Is it fitted with a watertight door ..... worked from .....

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

n Air Compressors, No. 1 No. of stages 2 diameters 100/120 mm stroke 90 mm driven by M. Engine

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

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

t provision is made for first charging the air receivers .....

venging Air Pumps, No. ..... diameter ..... stroke ..... driven by .....

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

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

JM 13/6/52

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AIR RECEIVERS:—Have they been made under survey? Yes State No. of report or certificate 2926

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. 2 Total cubic capacity 1100 liter Internal diameter 496 m/m thickness 9.5 m/m

Seamless, welded or riveted longitudinal joint Seamless. Material S.M. Steel Range of tensile strength 52-62 kg/mm² Working pressure by Rules Actual 30 kg

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 20-3-52 Receivers 20-3-52 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 10-3-52

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,

WERKSPOORNUM

Manufacturer.

Dates of Survey while building

During progress of work in shops: 1951 Jan 24, Febr 22-28, March 5-6-8, April 6, May 22, July 26

During erection on board vessel: Aug 14-17-20-27-28, Sept 7, 1952 March 7, May 1-15

Total No. of visits 18

Dates of examination of principal parts—Cylinders 22-28/2/51 5-3-51 Covers 8-3-51 Pistons 6-4-51 Rods ✓ Connecting rods 6-4-51

Crank shaft 5-3-51 Flywheel shaft ✓ Thrust shaft 15-5-52 Intermediate shafts 15-5-52 Tube shaft ✓

Screw shaft 15-5-52 Propeller 15-5-52 Stern tube 1-5-52 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 LLOYD'S Nº 12807 K.K. 5-3-51 Flywheel shaft, material ✓ Identification mark ✓

Thrust shaft, material S.M. Steel Identification mark LLOYD'S Nº 8512 H.P.B. 16-12-41 Intermediate shafts, material S.M. Steel Identification marks LLOYD'S Nº 755 P.F.W. 22-4-5

Tube shaft, material Identification mark Nº 906897-906899 Screw shaft, material Identification mark LLOYD'S Nº 741 P.F.W. 3-4-52 KK 15-5-52

Identification marks on air receivers LLOYD'S TEST 60 kg/m² W.P. 30 kg/m² R.R. 13-6-49

Welded receivers, state Makers' Name The Chesterfield Tube Co Ltd.

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 Special Survey in accordance with approved plan and Society Rules. Material tested as required and workmanship found good. The Engine has been tested on makers test bench under full load condition and found satisfactory. The Engine has been shipped to Sliedrecht (Rotterdam district). In my opinion the vessel for which this Engine is intended will be eligible for the notation of ✠ LMC (with date) when the whole machinery has been fitted satisfactorily on board and tried under full working condition. Copy certificates of Crank, thrust and Int. shafting and Air receivers attached.

2/3 × 86 × £5.60

The amount of Entry Fee ... £ £321.00

Special ... ... £ :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ £2.00

When applied for 21. 5. 1952

When received 19

W. Yuill

Engineer Surveyor to Lloyd's Register of Shipping

TUES. 6 JAN 1953

Committee's Minute

Assigned See F.E. mchy. rpt. Rot 35490

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

Certificate (if required) to be sent to

E. Ross 14.11.52

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