List of

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 22304

Received at London Office MAY -1 1937

ate of writing Report 19th April 1937 When handed in at Local Office 19 Port of Hamburg.

o. in Survey held at Augsburg and Hamburg Date, First Survey 8th June 1936 Last Survey 15th April 1937.
g. Book. Number of Visits 34.

on the ~~Single~~ Twin ~~Triple~~ ~~Quadruple~~ Screw vessel Nueva Granada Tons Gross 9968 Net 5782

uilt at Hamburg By whom built Deutsche Werft A. G. Yard No. 181 When built 1937

ngines made at Augsburg By whom made Maschinenfabrik Augsburg-Nürnberg Engine No. 681130/140 When made 1937.

onkey Boilers made at Hamburg By whom made Deutsche Werft A. G. Boiler No. 666/667 619/620 When made 1937

rake Horse Power 2 x 2600 Owners The Texas Company (Norway) A/S Port belonging to Oslo.

m. Horse Power as per Rule 2 x 585.5 = 1171 1167 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ade for which vessel is intended Tanker Service. Carrying Petroleum in bulk.

ENGINES, &c.—Type of Engines 2 x G 8 Z 52/90. 2 or 4 stroke cycle 2 Single or double acting single

imum pressure in cylinders 45 kg/cm² Diameter of cylinders 520 mm Length of stroke 900 mm No. of cylinders 2 x 8 No. of cranks 2 x 8
n Indicated Pressure 5.5 kg/cm²

of bearings, adjacent to the Crank, measured from inner edge to inner edge 680 mm Is there a bearing between each crank yes

lutions per minute 170 Flywheel dia. 1932 mm Weight 980 kg Means of ignition diesel ign. Kind of fuel used diesel oil

nk Shaft, dia. of journals as per Rule 319 mm as fitted 350 mm Crank pin dia. 350 mm Crank Webs Mid. length breadth 520 mm Mid. length thickness 160 mm shrunk Thickness parallel to axis — Thickness around eyehole —

wheel Shaft, diameter as per Rule — as fitted — Intermediate Shafts, diameter as per Rule 255 mm as fitted 260 mm Thrust Shaft, diameter at collars as per Rule 268 mm as fitted 330 mm

e Shaft, diameter as per Rule — as fitted — Screw Shaft, diameter as per Rule 282 mm as fitted 282 mm Is the ~~tube~~ screw shaft fitted with a continuous liner — yes

ze Liners, thickness in way of bushes as per Rule 16.2 mm as fitted 22 mm Thickness between bushes as per rule 12.15 mm as fitted 16 mm Is the after end of the liner made watertight in the

ller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —

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 —

o 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 the tube

— If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 1500 mm

eller, dia. 3800 mm Pitch 2660 mm No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 4.413 sq. m

od of reversing Engines direct by means of compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

eed Thickness of cylinder liners 49 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers lagged with

nducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine —

ing Water Pumps, No. 4 (1 driven by each main engine (each pump with 3 x 2); 2 rotary pumps driven by steam eng.) Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Pumps worked from the Main Engines, No. 2 Diameter 260 mm Stroke 200 mm Can one be overhauled while the other is at work yes

ps connected to the Main Bilge Line No. and Size 4 - 2 Bilgepumps each 50 m³/h, 1 Bilgepump 50 m³/h, 1 Ballastpump 70 m³/h
How driven by main engine, steam - duplex type, steam - duplex type

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

gements —

ast Pumps, No. and size 1 - 70 m³/h, steam duplex type Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3, one steam dupl. 75 m³/h, one driven by each m. eng. 90 m³/h

wo independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

s, No. and size:—In Machinery Spaces 3 - one frame - 9/10 - 90 ϕ, two frame - 24/25 - 90 ϕ, two frame - 46-49 - 90 ϕ; 2 for cofferdams: frame 25/26 - 90 ϕ, 1 frame 29/30 - 90 ϕ, 1 frame 53/54 - 150 ϕ. In Pump Room main 3 frame 90/91 90 ϕ, 1 frame 190/191 90 ϕ connected to stripper pumps 30 m³/h

ak... &c. 2 - frame 183/184 cargo hold - 90 ϕ, 1 - frame 196/197 pump room 60 ϕ, 1 - frame - 182/183 - cofferd 90 ϕ, 1 - frame - 199/200 - store deck 80 ϕ.

pendent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 3, Bilgep. 110 ϕ, Ballastp. 125 ϕ, Circ. sea water p. 125 ϕ.

ll the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

om easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

ll Sea Connections fitted direct on the skin of the ship chests welded to skin Are they fitted with Valves and Cocks yes

ey fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges above or below the deep water line above

ey 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

pipes pass through the ~~bunkers~~ shaft suction from cofferdam frame 53/54 150 ϕ How are they protected strong steel tube, 6.5 mm thickness of wall

pipes pass through the ~~deep~~ cargo tanks cargo suction lines Have they been tested as per Rule yes

ll Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

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

rtment to another yes Is the Shaft Tunnel watertight mach. aft Is it fitted with a watertight door — worked from —

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

in Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —

xiliary Air Compressors, No. 2 No. of stages 2 Diameters 100/350 mm Stroke 250 mm Driven by steam eng. n = 400

all Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —

avenging Air Pumps, No. each eng. 2 rotary blower pumps ~~Diameter~~ 350 m³/h ~~Stroke~~ n = 735 Driven by main engine

xiliary Engines crank shafts, diameter as per Rule 2 start. air comp. + steam eng. 1 steam eng + gen. 2 circ. cool. water p. - steam eng } all in main eng room.
as fitted 90/100 ϕ 100 ϕ Position 90 ϕ

AIR RECEIVERS:—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

~~High Pressure Air~~ Air whistle Receivers, No. 1 — Cubic capacity of each 0.5 m² — Internal diameter 700 mm — thickness 8 mm

Seamless, lap welded or riveted longitudinal joint riveted — Material S-M-Steel — Range of tensile strength 41-47 kg/mm² — Working pressure by Rules 8 Kg/cm², Actual 8 kg/cm²

Starting Air Receivers, No. 2 — Total cubic capacity each 10 m³ — Internal diameter 1750 mm — thickness 24.5 mm

Seamless, lap welded or riveted longitudinal joint riveted — Material S-M-Steel — Range of tensile strength shell 44/50, end pl. 41/47 — Working pressure by Rules 25 Kg/..., Actual 25 kg/cm²

IS A DONKEY BOILER FITTED? yes — If so, is a report now forwarded? yes

Is the donkey boiler intended to be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting yes (If not, state date of approval) — Receivers 27th June 1936, 29th Aug. 1935 — Separate Fuel Tanks yes

Donkey Boilers yes — General Pumping Arrangements yes — Pumping Arrangements in Machinery Space yes

Oil Fuel Burning Arrangements yes

SPARE GEAR.

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

State the principal additional spare gear supplied 2 Screw-shafts, 2 bronze propellers, 2 complete cyl. liners, 2 cyl. covers, 2 pistons complete with rings, 2 fuel injection pumps, 4 ... valves, 3 starting-valves, 18 fuel valves, 2 chains and wheels for camshaft drive, 2 chains for pumps driven by main engine, 100 piston rings

DESCRIPTION of CARGO PUMPS in Main Pump Rooms: in each pumproom 2 steam duplex pumps 350 m³/h 480 x 360 / 450, 2 steam dupl. p. 125 m³/h. 300 x 240 / 350, 1 stripper dupl. p. 150 x ... / 15...

The foregoing is a correct description.

DEUTSCHE WERFT AKTIENGESELLSCHAFT
[signature] — Manufacturer.

Dates of Survey while building	During progress of work in shops	Please see Augsburg Report dated 15th Febr. 1937, Nov. 11th, Dec. 7th, 10, 13, 14, 15, 16, 18, 22, Jan.
	During erection on board vessel	3rd, 4th, 5th, 8th, 9th, 10th, 11th, 22nd, 25th Febr., 2nd, 8th, 11th, 12th, 13th, 18th, 23rd, 24th, 27th March, 5th, 8th, 9th, 10th, 14th, 15th ...
	Total No. of visits	34

Dates of Examination of principal parts—Cylinders Please — Covers see — Pistons Augsburg — Rods Report — Connecting rods dated 15...

Crank shafts 8th March — Flywheel shaft — — Thrust shafts 2nd March — Intermediate shafts 2nd March — Tube shaft —

Screw shafts 22nd Febr. — Propeller 25th Febr. — Stern tube 22nd Febr. — Engine seatings 11th Febr. — Engines holding down bolts 13th Mar...

Completion of fitting sea connections 11th Febr. — Completion of pumping arrangements 5th April — Engines tried under working conditions 5th, 8th Ap...

Crank shaft, Material S-M-Steel — Identification Mark KH. 16460 3.9.36, H.B. 13609 27.10.36 — Flywheel shaft, Material — — Identification Mark —

Thrust shaft, Material S-M-Steel — Identification Mark J.G. 5357 8.12.36, J.G. 5356 8.12.37 — Intermediate shafts, Material S-M-Steel — Identification Marks J.G. 5375 22..., J.G. 5356 8.1...

~~Tube~~ Intern. shaft, Material S-M-Steel — Identification Mark J.G. 5374 12.1.37, J.L. 11598 4.1.36 — Screw shafts Material S-M-Steel, Spare — Identification Mark J.L. 11558+..., J.L. 11560+115...

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

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 no — If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c. These two Main-Diesel-Engines have been built at Augsburg under Special Survey of the Society's Surveyors. Material and workmanship of this machinery are of good quality and the outfit ample. It has been fitted under Special Survey at Hamburg in accordance with the approved plans, the Society's Letters and otherwise in conformity with the requirements of the Rules. I attended to a 12 hours final trial trip, when it has given full satisfaction under full working and manoeuvering conditions.
The Machinery is eligible in my opinion to be classed in the Society's Register Book with notation: + LMC (with date) - Oil Eng. - TS (CL)

Certificate (if required) to be sent to Hamburg Office

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

		When applied for,
The amount of Entry Fee	1/5 £ R.M. 24 :	26.4.1937
Special	1/5 £ R.M. 517 :	When received,
Donkey Boiler Fee	£ RM. 705 :	27.5.1937
3 Air Receivers	RM. 210 :	
Travelling Expenses (if any)	£ RM. 64 :	

Friedrich Witt — H. Röh...
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 7 MAY 1937

Assigned + LMC 4.37 Oil Eng. CL
2 SB
2 SB (W.T.) 5/7/1...