

# REPORT ON OIL ENGINE MACHINERY.

No. 33546.

Received at London Office

30 MAY 1951

st. 4b.

Date of writing Report 22/5 1951 When handed in at Local Office

19 Port of Rotterdam

Survey held at Rotterdam

Date, First Survey 7-3-49 Last Survey

Number of Visits 81

14-3-1951

g. Book.

15576 on the Twin Triple Quadruple

Screw vessel

M.V. "Dan Lorenzo"

Gross 11673.73  
Tons 6526.12

uilt at Rotterdam

By whom built P. Smitt Jr. N.V.

Yard No. 590 When built 1951

Engines made at Rotterdam

By whom made P. Smitt Jr. N.V.

Engine No. 673/74 When made 1951

monkey Boilers made at Rotterdam

By whom made P. Smitt Jr. N.V.

Boiler No. 738/39 When made 1951

ake Horse Power 9300 = 2 engine

Owners Yacimientos Petroliferas Fiscales

Port belonging to Buenos Aires 1951

N. Power as per Rule 1600 ✓ NHP = 1472

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ade for which vessel is intended Seaguing Service

ENGINES, &c. — Type of Engines Heavy Oil 8 cylinder type 574 TF 160.2 or 4 stroke cycle 2 ✓ Single or double acting single

maximum pressure in cylinders 29.8" 63" 600 lbs. Diameter of cylinders 740 m.m. Length of stroke 1600 m.m. No. of cylinders 5 ✓ No. of cranks 5

ean Indicated Pressure 93 lbs. Ahead Firing Order in Cylinders 1-5-2-3-4- ✓ Span of bearings, adjacent to the crank, measured

m inner edge to inner edge 976 m.m. Is there a bearing between each crank Yes ✓ Revolutions per minute 115 ✓

wheel dia. 2430 Weight 11635 K.G. Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>) 40.000 kg/m<sup>2</sup> Means of ignition Compression kind of fuel used Diesel oil

ank shaft, Solid forged dia. of journals as per Rule App'd. Crank pin dia. 550 m.m. Crank webs Mid. length breadth 1020 Thickness parallel to axis 280

Semi-built dia. of journals as fitted 550 m.m. with 220 m.m. central bore Mid. length thickness 280 shrunk Thickness around eyehole 290

All built with 220 m.m. central bore as per Rule App'd. Thrust Shaft, diameter at collars as fitted 509 m.m. with 160 m.m. long as per Rule App'd.

wheel Shaft, diameter as per Rule App'd. Intermediate Shafts, diameter as fitted 370 m.m. Thrust Shaft, diameter at collars as per Rule App'd.

ube Shaft, diameter as per Rule App'd. Screw Shaft, diameter as per Rule App'd. Is the (tube) shaft fitted with a continuous liner Yes

onze Liners, thickness in way of bushes as per Rule App'd. Thickness between bushes as per Rule App'd. Is the after end of the liner made watertight in the

opeller boss Yes 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-

rrosive. 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

d of tube shaft No If so, state type Length of bearing in Stern Bush next to and supporting propeller 1965 m.m.

propeller, dia. 4800 m.m. Pitch 4800 m.m. No. of blades 4 Material bronze whether moveable solid Total developed surface 7224 m<sup>2</sup> feet

oment of inertia of propeller (lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>) 30.000 kg/m<sup>2</sup> Kind of damper, if fitted

ethod of reversing Engines Dens. motor Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes ✓ Means of

trication fixed Thickness of cylinder liners 52 m.m. 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

ck to the engine Cooling Water Pumps, No. 3 ✓ 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. 2 ✓ Diameter Stroke Can one be overhauled while the other is at work

umps connected to the Main Bilge Line No. and size 3. Steam bilge pump 130 T/L Ballast pump 130 T/L Emergency bilge pump 150 T/L

How driven Bilge, ballast pumps steam driven Emergency bilge pump by electric motor

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

rangements

One bilge pump 130 T/L

allast Pumps, No. and size 2. One in fixed pump Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2. 400 m<sup>3</sup>/h each.

room 60 T/L

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

lge pumps, No. and size: In machinery spaces 2 off 100 m.m. 8 off 70 m.m. 2 tunnel 2 off 80 m.m. In pump room 2 off 70 m.m. 1 off 80 m.m.

holds, &c. 3 off 70 m.m. 2 fixed pump 1 off 70 m.m. Firepunktflat 2 off 70 m.m. Redundant 1 off 50 m.m. Hand pump on claim ladder

Independent Power Pump Direct Suctions to the engine room bilges, No. and size One of 260 m.m. 2 off 100 m.m.

re all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes ✓ Are the bilge suctions in the machinery spaces led from easily

ccessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes ✓

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

ufficiently high on the ship's side to be seen without lifting the platform plates No Are the overboard discharges above or below the deep water line below

re 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

that pipes pass through the bunkers Suction of aft cofferdam How are they protected heavy gauge pipe, unprotected

that pipes pass through the deep tanks cargo piping Have they been tested as per Rule Yes ✓

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

s 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

paces, or from one compartment to another Yes ✓ Is the shaft tunnel watertight Yes ✓ Is it fitted with a watertight door Yes worked from boat deck

f 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. 2 ✓ No. of stages 2 diameters 212 / 238% stroke 160 % driven by aux engines

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

Small Auxiliary Air Compressors, No. 1 ✓ No. of stages 2 diameters 80 / 98% stroke 100 % driven by emergency dyno engine

What provision is made for first charging the air receivers emergency dynamo engine started by hand

Scavenging Air Pumps, No. 1 blowing each engine diameter impellers 120 m.m. stroke Cap 456 m<sup>3</sup>/min driven by main engines

Auxiliary Engines crank shafts, diameter as per Rule

as fitted 170 m.m. position One on port, one on starboard side

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

100-010652-010661-0017

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AIR RECEIVERS:—Have they been made under survey. Yes ✓ State No. of report or certificate R. Dam N° 69

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 main + 1 Whistle Total cubic capacity 40 m³ + 350 ltr Internal diameter 2000 mm thickness 267 mm

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

IS A DONKEY BOILER FITTED 2nd gas bls. If so, is a report now forwarded. Yes ✓

Is the donkey boiler intended to be used for domestic purposes only. Cargo pumping Heating Bridge ballast pumping Windlass Fire extinguishers

PLANS. Are approved plans forwarded herewith for shafting 15-12-48 - 8-7-49 Receivers 12-7-48 Separate fuel tanks 2nd gas bls

Donkey boilers 30-9-48 General pumping arrangements 7/10/48 - 29/3/50 Pumping arrangements in machinery space 7-10-48

Oil fuel burning arrangements 29-3-49

Have Torsional Vibration characteristics been approved. Yes ✓ Date of approval E letter dated 16-12-

### SPARE GEAR.

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

State the principal additional spare gear supplied. Spare screw shaft.

Description of fire extinguishing apparatus. One foam generator, capacity 4500 liters/min with hoses & nozzles in engine room and donkey boiler space. One foam type extinguisher of 136 liter 4 CO<sub>2</sub> snow extinguisher 2 gallons each. 2 Open guns near switch boards. Steam system in donkey boiler space.

The foregoing is a correct description,

MACHINEFABRIEK & SCHEEPSWERF VAN P. SMIT JR. N.V.  
F. W. J. van Beurden

Dates of Survey while building  
During progress of work in shops - 1949: 8/3 - 20/4 - 24/4 - 3/6 - 7/6 - 5/7 - 22/7 - 20/12. 1950: 5/11 - 6/11 - 24/11 - 7/12 - 15/12 - 22/12 - 1/1 - 6/3 - 20/4 - 25/4 - 26/4 - 5/5 - 12/5  
23/5 - 24/5 - 24/5 - 5/6 - 9/6 - 14/6 - 21/6 - 24/6 - 23/6 - 4/7 - 12/7 - 24/7 - 27/7 - 10/8 - 11/8 - 23/8 - 19/9 - 23/9 - 10/10 - 14/10 - 24/10 - 9/11 - 13/11  
7/12 - 8/12 - 13/12 - 18/12 - 24/12. 1951: 2/1 - 9/1 - 14/1 - 19/1 - 9/2.

During erection on board vessel - 1950: 11/8 - 18/8 - 23/8 - 4/9 - 11/9 - 14/9 - 24/9 - 25/9 - 24/10 - 2/11 - 4/12 - 21/12.  
1951: 26/1 - 2/2 - 21/2 - 22/2 - 27/2 - 2/3 - 6-7-8/3 - 12/3 - 14/3.

Total No. of visits 81.

Dates of examination of principal parts—Cylinders 16-10-50 Covers 26-10-50 Pistons 10-10-50 Rods 10-10-50 Connecting rods 6-10-50

Crank shaft 22-9-50 Flywheel shaft 2-6-50 Thrust shaft 21-9-50 Intermediate shafts 24-5-50 Tube shaft

Screw shaft 5-5-50 Propeller 11-10-50 Stern tube 20-4-50 Engine seatings 2-11-50 Engine holding down bolts 26-1-51

Completion of fitting sea connections 11-9-50 Completion of pumping arrangements 27-2-51 Engines tried under working conditions 6-10-3/5

Crank shaft, material S.M. steel Identification mark LLOYD'S NO 534 PFW 2-6-50 Flywheel shaft, material Identification mark

Cast steel webs Identification mark LLOYD'S NO 565 PFW 22-9-50

Thrust shaft, material S.M. steel Identification mark LLOYD'S NO 535 PFW 2-6-50 Intermediate shafts, material S.M. steel Identification mark

LLOYD'S NO 564 PFW 11-9-50 LLOYD'S NO 206 long. s

Tube shaft, material Identification mark Screw shaft, material S.M. steel Identification mark LLOYD'S NO 206 long. s

Identification marks on air receivers

No 361 - 362  
LLOYD'S TEST  
40 KG/122  
WP 25 KG/12.5  
EMD 4-7-50

LLOYD'S NO 2210 LM/PFW 10-5-5

Spare shaft: LLOYD'S NO 2183 LM/PFW 21-7-50

Welded receivers, state Makers' Name.

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. Please see above.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. Tanker ✓ 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. Not desired ✓

Is this machinery duplicate of a previous case. Yes. If so, state name of vessel M.V. Director Madrasia.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery has been constructed under

Special Survey in accordance with the Society's Rules, approved plans and Secreta letters, of materials tested as required and has been satisfactorily fitted in the vessel.

The workmanship is throughout good. A notice board has been fitted at the control station stating that the engines are not to be operated continuously between 51.

62 RPM and the engine tachometers marked accordingly. The machinery has been

tried under full working condition and found in good working and manoeuvring order and is in my opinion eligible to be classed in the Society's Register.

With + LMC - 3-51 - Oil Engines - C.L.

The amount of Entry Fee ... fl 5610.-

Special welding fl 755.- When applied for 22/2 19 57

Donkey Boiler Fee ... £ : When received 14/3 19 57

Travelling Expenses (if any) fl 104.- FRI. 15 JUN 1951

Committee's Minute

Assigned + LMC 3.51 Oil Eng. (with endorsement)

2 NTDB 18016 C.L.

2 DB 18016

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