

REPORT ON OIL ENGINE MACHINERY

No. 11970

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When handed in at Local Office

17.7.56

Port of

BILBAO

No. in Survey held at
Reg. Book. N.E. No 9

Santander

Date, First Survey

1st March 1955

Last Survey

11th June

1956

Number of Visits 16

35565 on the ~~Twin~~ ^{Single} ~~Triple~~ ^{Screw vessel} ~~Quadruple~~

Motor Vessel "SAN FLORO"

Tons Gross 644
Net 250

Built at Santander

By whom built Corcho Hijos, S.A.

Yard No. 65

When built 1956

Engines made at Kiel-Friedrichsort

By whom made Messrs. MAK Maschinenbau Kiel

Engine No. 10648

When made 1956

Donkey Boilers made at None

By whom made -

Boiler No. -

When made -

Brake Horse Power { Maximum -
Service 1150

Owners Jose Manuel Pombo Romero-Robledo

Port belonging to

Santander

I.N. as per Rule 230

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

Trade for which vessel is intended Coaster

IL ENGINES, &c. - Type of Engines Heavy oil- MAK type MSu582A

2 or 4 stroke cycle

Single or double acting

Maximum pressure in cylinders

Diameter of cylinders

Length of stroke

No. of cylinders

No. of cranks

Mean Indicated Pressure

Span of bearings (i.e., distance between inner edges of bearings in

of a crank)

Is there a bearing between each crank

Revolutions per minute

Maximum

Service

Flywheel dia.

Weight

Moment of inertia of flywheel (in² or Kg.cm²)

Means of ignition

Kind of fuel used

Crank Shaft, { Solid forged
Semi built
All builtdia. of journals as per Rule
as fitted

Crank pin dia.

Crank webs

Mid. length breadth
Mid. length thickness

shrunk

Thickness parallel to axis
Thickness around eye-hole

Flywheel Shaft, diameter as per Rule

as fitted

Intermediate Shafts, diameter as per Rule

as fitted

200 mm.

Thrust Shaft, diameter at collars as per Rule

as fitted

220 mm.

Tube Shaft, diameter as per Rule

as fitted

Screw Shaft, diameter as per Rule

as fitted

210 mm.

Is the (tube) shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes as per Rule

as fitted

15 mm.

Thickness between bushes as per Rule

as fitted

10 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 One length

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

Flight If two liners are fitted, is the shaft lapped or protected between the liners

-

Is an approved Oil Gland fitted at the after

end of stern tube

No

If so, state type

-

Length of bearing in Stern Bush next to and supporting propeller 765 mm.

Propeller, dia.

2320 mm.

Pitch

1290 mm.

No. of blades

4

Material

bronze

whether moveable

fixed

Total developed surface 1.902 sq. feet

Moment of inertia of propeller including entrained water (lbs. in² or Kg.cm²)GD²=850 Kg/m²

Kind of damper, if fitted

friction

Method of reversing Engines direct

Is a governor or other arrangement fitted to prevent racing of the engine

Yes

Means of

lubrication

forced

Thickness of cylinder liners

30 mm.

Are the cylinders fitted with safety valves

Yes

Are the exhaust pipes and silencers water cooled

and

lagged with non-conducting 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

Funnel

Cooling Water Pumps, No. and how driven

4 M. Eng. & Elec. Motors

Working F.W. 1-25 T/h.

F.W. 1-43 m³/h.Spare F.W. 1-45 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. and capacity

1 - 43 m³/h.

Can one be overhauled while the other is at work

Yes

Pumps connected to the Main Bilge Line

No. and capacity of each

3 - 1-43 m³/h., 1-25 m³/h., 1-35 T/h.

How driven

M. Eng.

Electric Motors

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 capacity

1-25 T/h.

Power Driven Lubricating Oil Pumps, including spare pump, No. and size

2-3000 L/min. 1 of 20 T/h.

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Branch Bilge Suctions

12

No. and size: In machinery spaces

8: 1 of 4" Ø - 7 of 3" Ø

2 of 3" Ø

In pump room

None

In holds, etc.

No. 1 hold, 2 of 3" Ø - No. 2 hold, 2 of 3" Ø.

Direct Bilge Suctions to the engine room bilges, No. and size

1 of 4" Ø - 2 of 3" Ø.

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

on boxes

Are they fitted with valves or cocks

Valves

Are they fixed

efficiently 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

below

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

None

What pipes pass through the bunkers

None

How are they protected

-

What pipes pass through the deep tanks

None

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

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

None

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

Steel vessel

Main Air Compressors, No.

One

No. of stages

2

diameters

120 (120-108)

stroke

70 mm.

driven by

M. Eng.

Auxiliary Air Compressors, No.

One

No. of stages

2

diameters

100/35

stroke

80 mm.

driven by

Aux. Oil Eng.

Small Auxiliary Air Compressors, No.

None

No. of stages

-

diameters

-

stroke

-

driven by

-

What provision is made for first charging the air receivers

Hand start Diesel Eng. driving Auxiliary Compressor

Supercharge

Suctioning Air Pumps or Blowers, No. One VTR 320/120

How driven

exhaust gas

Auxiliary Engines

Have they been made under survey

No

Engine Nos.

67116558 and 67162023

Position of each in engine room

Eng. Room (p. and s.)

Makers' name

General Motor Corporation, Detroit

Report No.

1828 Cert.

AIR RECEIVERS:—Have they been made under survey Yes State No. of report or certificate Hno.C.50/504-56/5
State full details of safety devices Spring loaded safety valves & fusible plugs fitted in each receiver.
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. None Cubic capacity of each - Internal diameter - thickness -
Seamless, welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure -
Starting Air Receivers, No. 3 Total cubic capacity 3x600 Lts. Internal diameter 492 mm. thickness 14 mm.
Seamless, welded or riveted longitudinal joint Welded Material Steel Range of tensile strength as per Rule Working pressure 40 Atm.
IS A DONKEY BOILER FITTED No 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 28.10.55 (Ham.) Receivers - Separate fuel tanks 4.6
(If not, state date of approval)
Donkey boilers - General pumping arrangements 2.5.55 Pumping arrangements in machinery space 2.5.55
Oil fuel burning arrangements -
Have Torsional Vibration characteristics been approved Yes Date and particulars of approval 12.1.56 for a service speed
300 RPM. subject to the torsigraph reg
SPARE GEAR. now submitted being approved in London
Office.
Has the spare gear required by the Rules been supplied Yes State if for "short voyages" only -
State the principal additional spare gear supplied as per enclosed list.
Crankcase Relief Devices.— This engine is provided with 6 automatic valves of 105 mm. dia.

CORCHO HIJOS, S. A.

DIRECTOR-GERENTE

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops ALVARO MAGUIZA
During erection on board vessel From 1-3-55 to 11-6-56
Total No. of visits 16
Dates of examination of principal parts—Cylinders See Covers Kiel Pistons Report Rods No. Connecting rods 1476
Crank shaft - Flywheel shaft - Thrust shaft 24.4.56 Intermediate shafts 24.4.56 Tube shaft None
Screw shaft 24.4.56 Propeller 14.2.56 Stern tube 24.1.56 Engine seatings 30.9.55 Engine holding down bolts 28.5.56
Completion of fitting sea connections 23.11.55 Completion of pumping arrangements 30.5.56 Engines tried under working conditions 0.4.11.6
Crank shaft, material S.M. Steel Identification mark HAB 9.7.53 Flywheel shaft, material - Identification mark Lloyds H
Thrust shaft, material S.M. Steel Identification mark 28.7.55 Intermediate shafts, material S.M. Steel Identification marks 848 HL.27
Tube shaft, material - Identification mark - Screw shaft, material S.M. Steel Identification mark 827 HL.25.1
Identification marks on air receivers No. 2330 - Lloyds Test Hno. 64 Atm. W.P.40 H.I. 10.11.55
No. 2332 - " " " 64 " W.P.40 " K.M. 24.10.55
No. 2329 - " " " 64 " W.P.40 " K.M. 24.10.55

Welded receivers, state Makers' Name Messrs. Ruhrstahl Ag., Presswerke, of Brackwede.
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
Full description of fire extinguishing apparatus fitted in machinery spaces 2 hydrants & 1 foam extinguisher of 50 Lts. & 3 chem
extinguishers of 10 Lts. in E.R. - 3 chemical extin
of 10 Lts. fitted near the E.R. entrance door (outs
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with -
What is the special notation desired -
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, Speed restrictions, &c. The machinery of this vessel has
been satisfactorily installed under Special Survey in accordance with the Rules, approved
plans and Secretary's letters. Material used and workmanship are good. Satisfactory full power
sea trials have been carried out. This machinery in my opinion is entitled to be classed in
this Society with the record of IMC 6,56 and notation of CL (Screw shaft) "Oil Eng." when the
torsional vibration characteristics have been approved with the torsigraph records now
forwarded to London Office for verification.
Enclosures:— Machinery plans, — Auxiliary Engines, Air receivers, and Forging Certificates.
List of spare pieces — Copy of interim Certificate.

During construction
The amount of Entry Fee Ptas. 8602
auxiliary oil Eng. 2000
Special £ 600
Donkey Boiler Fee £ :
Travelling Expenses (if any) £ :
When applied for 17.7.56
When received 19

Committee's Minute FRIDAY - 7 SEP 1956

Assigned + LMC 6.56

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation