

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 10713

Date of writing Report 12<sup>th</sup> Feb 1953

When handed in at Local Office

19

Port of

Received at London Office

Amsterdam

No. in  
Reg. Book.

Survey held at

Amsterdam

Date, First Survey

10<sup>th</sup> May 1952

Last Survey

24<sup>th</sup> Dec 1952

Number of Visits

11

1952

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

M.V. BIDURI

Indonesian Republic

Built at

Waterhuizen

By whom built

Gehusweg Patje  
Werkspoor N.V.

Engines made at

Amsterdam

By whom made

Donkey Boilers made at

Brake Horse Power

Maximum

Service

500

Owners

M.N. as per Rule

100

Is Refrigerating Machinery fitted for cargo purposes

Port belonging to

Is Electric Light fitted

Trade for which vessel is intended

Open Sea Service

OIL ENGINES, &amp;c. —Type of Engines

T.M.A.S. 278

Maximum pressure in cylinders

50 kg/cm<sup>2</sup>

Diameter of cylinders

270 mm

2 or 4 stroke cycle

4

Single or double acting

Single

Mean Indicated Pressure

7.56 kg/cm<sup>2</sup> A.F.O.

1-4-7-6-8-5-2-3

Length of stroke

500 mm

No. of cylinders

8

No. of cranks

8

way of a crank

318 mm

Is there a bearing between each crank

Yes

Revolutions per minute

Maximum

325

Flywheel dia.

1120 mm

Weight

1250 kg

Moment of inertia of flywheel (lb-in<sup>2</sup> or Kg-cm<sup>2</sup>)

1030

Means of ignition

Lamp

Kind of fuel used

Fuel

Crank

Solid forged

Shaft

Semi built

dia. of journals

as per Rule

as fitted

200 mm

Crank pin dia.

200 mm

Crank webs

Mid. length breadth

240 mm

Thrust Shaft, diameter at collars

as per Rule

as fitted

215 mm

Flywheel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as fitted

205 mm

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

200 mm

Is the

tube

screw

shaft fitted with a continuous liner

no

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

end of stern tube. If so, state type

Is an approved Oil Gland fitted at the after

Propeller, dia. 1840 mm Pitch

No. of blades

4

Material

brass

whether moveable

Total developed surface

sq. feet

Moment of inertia of propeller including entrained water (lb-in<sup>2</sup> or Kg-cm<sup>2</sup>)

259

Method of reversing Engines

Direct

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

lubrication. Thickness of cylinder liners

21 mm

Are the cylinders fitted with safety valves

Yes

Means of

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. and how driven

12am Type 120x75 Cap 26 T/h

Working by Man Eng

S.W. Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. and capacity

12am Type 120x75 Cap 26 T/h

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and capacity of each

How driven

Is the cooling water led to the bilges

arrangements

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Ballast Pumps, No. and capacity

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

120 T. Cap 4.5 T/h

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

No. and size:—In machinery spaces

In holds, &amp;c.

Branch Bilge Suctions

In pump room

Direct Bilge 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 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

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

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

2

diameters

100/120 mm

stroke

90 mm driven by Man Eng

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 or Blowers, No.

How driven

Auxiliary Engines

Have they been made under survey

Engine Nos.

Makers name

Position of each in engine room

Report No.

010283-010288-0118



4B 18713

AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate 3248/1445  
State full details of safety devices Safety valves fitted  
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 ✓  
Starting Air Receivers, No 2 Total cubic capacity 1240 h Internal diameter 490 mm thickness 11.5 mm  
Seamless, welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 34.8-48.1 kg/cm<sup>2</sup> Working pressure 30 atm  
56.5-53.8 kg/cm<sup>2</sup>

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 29-12-52 Receivers 29-12-52 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 and particulars of approval 5-1-53  
8-1-53

### SPARE GEAR.

Has the spare gear required by the Rules been supplied ✓ State if for "short voyages" only ✓

State the principal additional spare gear supplied ✓

The foregoing is a correct description,

WERKSPOR N.V.

Manufacturer.

Dates of Survey while building 1952. 10/5 - 12/5 - 13/5 - 23/5 - 4/6 - 9/6 - 13/6 - 1/7 - 9/8 - 13/12 - 24/12

Dates of examination of principal parts—Cylinders 4/6/52 Covers 1/7/52 Pistons 9/8/52 Rods ✓ Connecting rods 7/11/52

Crank shaft 13/6/52 Flywheel shaft 13/6/52 Thrust shaft 20/5/52 Intermediate shafts 11/2/53 Tube shaft ✓

Screw shaft 5/2/53 Propeller ✓ Stern tube ✓ Engine seatings ✓ Engine holding down bolts 13/12/52

Completion of fitting sea connections ✓ Completion of pumping arrangements ✓ Engines tried under working conditions ✓

Crank shaft, material S.M. Steel Identification mark Plates No. 16944 K.H. 9-6-52 Flywheel shaft, material ✓ Identification mark ✓

Thrust shaft, material S.M. Steel Identification mark Plates No. 16674 K.H. 20-5-52 Intermediate shafts, material S.M. Steel Identification marks Plates No. 907 H.A. 11-2-53

Tube shaft, material ✓ Identification mark ✓ Screw shaft, material S.M. Steel Identification mark Plates No. 839 H.A. 15-2-53

Identification marks on air receivers No 3/1. Plates Test: T.P. 60 atm. W.P. 20 atm. M.S.A. 10-4-52.

No 2/2. Plates Test: T.P. 60 atm. W.P. 20 atm. K.H. 8-6-51.

Welded receivers, state Makers' Name ✓

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 ✓

Full description of fire extinguishing apparatus fitted in machinery spaces ✓

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 ✓

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 ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)

This engine has been built under Special Survey in accordance with approved plans Society Rules and Secretarial letters. All materials have been tested as required and the workmanship found good. The engine has been tried on makers Testbed under full load conditions and found working satisfactorily.

In my opinion the vessel for which this engine is intended will be eligible for the notation L.M.C. with date when fitted and examined on board.

Copy certificates of crankshaft. Thrust shaft. Screw shaft. Intermediate shaft and receivers attached.

The amount of Entry Fee £ 374

Special £ When applied for 16-2 1953

Donkey Boiler Fee £ When received 19

Travelling Expenses (if any) £ 10

Committee's Minute FRIDAY 14 AUG 1953

Assigned See F.E. Michy. rpt.

Engineer Surveyor to Lloyd's Register of Shipping.



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