

REPORT ON OIL ENGINE MACHINERY

No. 19124

Received at London Office 12 OCT 1953

Date of writing Report 24th Sept. 1953 When handed in at Local Office 19 Port of Amsterdam
Date, First Survey 11th February Last Survey 21st Sept. 1953
Number of Visits 6

Survey held at Amsterdam
Type of vessel Single on the Twin Triple Screw vessel
Name of ship "LIAM INTAN"
Builder Geln. van Diepen
Yard No. 924 When built 1953
Engines made at Amsterdam By whom made Werkspoor "L"
Engine No. 1479 When made 1953
Boiler No. When made
Owners Indonesian Republic
Port belonging to
Is Refrigerating Machinery fitted for cargo purposes
Is Electric Light fitted

Type of Engines T.M.A.S. 278
2 or 4 stroke cycle 4 Single or double acting Single
Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 270 mm Length of stroke 500 mm No. of cylinders 8 No. of cranks 8
Indicated Pressure 7.56 kg/cm² A.F.O. 1-4-7-6-8-5-2-3
Span of bearings (i.e., distance between inner edges of bearings in
of a crank) 318 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum Service 325
Flywheel dia. 1120 mm Weight 1250 kg Moment of inertia of flywheel (in in² or Kg.cm²) 1030 Means of ignition Compa Kind of fuel used Diesel
" " " " balance wts. (" " " ")

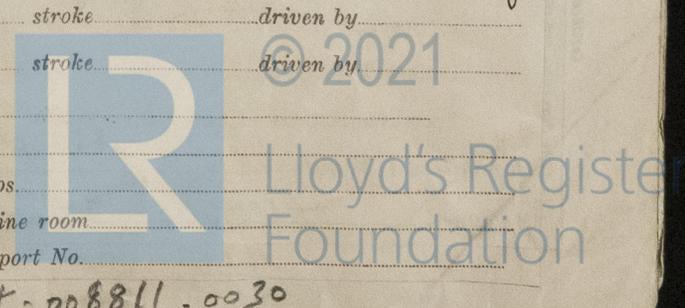
Material of journals as per Rule. Appn. as fitted 200 mm Crank pin dia. 200 mm Crank webs Mid. length breadth 340 mm Thickness parallel to axis
Solid forged Semi built All built
Thrust Shaft, diameter at collars as per Rule. Appn. as fitted 215 mm
Intermediate Shafts, diameter as per Rule. Appn. as fitted 205 mm
Screw Shaft, diameter as per Rule. Appn. as fitted 200 mm Is the tube screw shaft fitted with a continuous liner
Thrust Liners, thickness in way of bushes as per Rule. Appn. as fitted Thickness between bushes as per Rule. Appn. 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-
osive. If two liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland fitted at the after
of stern tube. If so, state type. Length of bearing in Stern Bush next to and supporting propeller
Propeller, dia. 1840 mm Pitch No. of blades 4 Material Bronze whether moveable fixed Total developed surface sq. feet
Moment of inertia of propeller including entrained water (in in² or Kg.cm²) 259 Kind of damper, if fitted

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of
Thickens of cylinder liners 2 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
with non-conducting material Cooled 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. and how driven 1 - ME Driven Working F.W.
Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Pumps worked from the Main Engines, No. and capacity 1 - 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
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
arrangements

ME Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 - 10 T - cap 4.5 T/h
Two independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions
In machinery spaces In pump room
Bilge 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 suction pipes 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
Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed
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
Pipes pass through the bunkers How are they protected
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
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
or from one compartment to another Is the shaft tunnel watertight Is it fitted with a watertight door worked from
Good vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. 1 No. of stages 2 diameters 100 x 120 mm stroke 90 mm driven by Main Eng.
Primary Air Compressors, No. No. of stages diameters stroke driven by
Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
Provision is made for first charging the air receivers
Lubricating Air Pumps or Blowers, No. How driven
Primary Engines Have they been made under survey Engine Nos. Position of each in engine room Report No.

Makers name
Report No. 008804-008811-0030



46. 19127

AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate D.P. 1485/4049

State full details of safety devices Spring loaded 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 1240R Internal diameter 502/499 mm thickness 9.5/11.5 mm

Seamless, welded or riveted longitudinal joint Seamless Material S.M. Steel Range of tensile strength 33.1-40 kg/cm²
35.8-49.1 kg/cm² Working pressure 30 atm

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 ✓

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 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

WERKSPOR N.V. a correct description, Manufacturer.

Dates of Survey while building: During progress of work in shops 11/2-13/3-16/3-27/3-16/9-21/9

During erection on board vessel 6 Total No. of visits 6

Dates of examination of principal parts: Cylinders 15-2-53 Covers 16-3-53 Pistons 16-3-53 Rods 16-3-53 Connecting rods 16-3-53

Crank shaft 5-2-53 Flywheel shaft 4-8-53 Thrust shaft 4-8-53 Intermediate shafts 16-9-53 Tube shaft 16-9-53

Screw shaft 16-9-53 Propeller 16-9-53 Stern tube 16-9-53 Engine seatings 16-9-53 Engine holding down bolts 16-9-53

Completion of fitting sea connections 16-9-53 Completion of pumping arrangements 16-9-53 Engines tried under working conditions 16-9-53

Crank shaft, material S.M. Steel Identification mark AL 8-3-53 Flywheel shaft, material 16-9-53 Identification mark 16-9-53

Thrust shaft, material S.M. Steel Identification mark KK 4-8-53 Intermediate shafts, material 16-9-53 Identification marks 16-9-53

Tube shaft, material 16-9-53 Identification mark 16-9-53 Screw shaft, material 16-9-53 Identification mark 16-9-53

Identification marks on air receivers no/48/2. Ployas Test. T.P. 60 atm. W.P. 30 atm. W.S. 22/7-52. no/10/1. Ployas Test. T.P. 60 atm. W.P. 30 atm. M.S.A. 11-7-51.

Welded receivers, state Makers' Name Mess Rheinisch Röhrenwerk AG of Düsseldorf, Rheinfeld

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 yes If so, state name of vessel "Behaka" - "Belatik"

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 plan Rule requirements and Secretary's letters. All materials have been tested as required and the workmanship found good. The engine has been tried on maker's test bed 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 the machinery has been satisfactorily fitted and tried on board. The engine has been shipped to Terschelling (Groningen district). Copy certificates of crankshaft, thrustshaft and starting air receivers attached here.

The amount of Entry Fee ... £ 374- : When applied for 8-10-53
Special ... £ : :
Donkey Boiler Fee... £ : :
Travelling Expenses (if any) £ : :
When received 19

Engineer Surveyor to Lloyd's Register of Shipping
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Committee's Minute
Assigned 7 LMC 1.54 Oil Eng.
FRIDAY 9 FEB 1954
OG.