

REPORT ON OIL ENGINE MACHINERY.

No. 25461

Received at London Office 5 AUG 1949

Writing Report 28th May 1949 When handed in at Local Office 28 149 Port of ANTWERP
Survey held at SERAINC & ANTWERP Date, First Survey 9-7-45 Last Survey 5-5-1949
Number of Visits 59
Single on the TWIN Triple Quadruple Screw vessel M/E "BELGIAN PRIDE"
Gross 3702 Tons Net 4969
Hoboken By whom built R. A. J. M. Cockaert Yard No. 694 When built 1948
Made at Pening By whom made do do Engine No. 279 When made 1947
Boilers made at do By whom made do do Boiler No. 17224 When made 1948
Horse Power 5000 max 4200 no Owners Belgian Gulf Oil Co Port belonging to Antwerp
Per as per Rule 1028 NHP Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes
Which vessel is intended Unrestricted

GINES, &c. Type of Engine Cockaert Borestein 5.62 W.F. 4/2 or 4 stroke cycle Single or double acting double
pressure in cylinders 200 lbs/in² Diameter of cylinders 6.20 Length of stroke 1.55 No. of cylinders 5 No. of cranks 5
Indicated Pressure 94 lbs/in² Ahead Firing Order in Cylinders 1-4-3-2-5 Span of bearings, adjacent to the crank, measured
from edge to inner edge 1.164 Is there a bearing between each crank Yes Revolutions per minute 107 max
dia. 2.62 Weight 2.680 Moment of inertia of flywheel (16lbs. in² or Kg.m²) 16.75 Means of ignition Comps. Kind of fuel used Diesel oil
Solid forged as per Rule dia. of journals 4.24 Crank pin dia. 4.24 Crank webs Mid. length thickness 2.50 shrunk Thickness parallel to axis 2.50
Semi built as fitted 4.24 with 115 central hole Thickness around eyehole 2.50
All built as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted 4.60 with 115 central hole
ft, diameter as per Rule Screw Shaft, diameter as fitted 4.14 and 3.90 Is the (tube) shaft fitted with a continuous liner Yes
Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted 1.8 Is the after end of the liner made watertight in the
boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes
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-
Yes If two liners are fitted, is the shaft lapped or protected between the liners No Is an approved Oil Gland or other appliance fitted at the after
shaft No If so, state type Length of bearing in Stern Bush next to and supporting propeller 16.75
dia. 5.50 Pitch 4.120 No. of blades four Material Bronze whether moveable no Total developed surface 10.14 sq. feet
Moment of inertia of propeller (16lbs. in² or Kg.m²) 61.800 Kind of damper, if fitted Yes
Reversing Engines Camshaft Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of
Locks Thickness of cylinder liners 42 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
engine Cooling Water Pumps, No. two attached to MM and two independent Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
Pumps worked from the Main Engines, No. two 60 T/h Diameter 235 mm Stroke 190 mm Can one be overhauled while the other is at work Yes
Connected to the Main Bilge Line No. and size four two attached to MM of 60 T/h each One independent of 25 T/h
How driven two from main engine two independent pumps steam driven
Drinking 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
Pumps, No. and size two one 50 T/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size one attached 250 T/h
Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary
Pumps, No. and size:—In machinery spaces 100 mm dia. 2 in. capped down 70 mm x 2 In pump room Main 125 mm x 7
In bilge space 70 mm x 2 In deck space 50 mm x 2
Direct Power Pump Direct Suctions to the engine room bilges, No. and size 100 mm x 7 150 mm x 7
Bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction in the machinery spaces led from easily
removable mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks valves and cocks Are they fixed
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
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 One ballast pipe How are they protected without joints welded to bulkheads Solid drawn steel pipe 6 in. dia.
Pipes pass through the deep tanks One ballast pipe Have they been tested as per Rule do do
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
space from one compartment to another Yes Is the shaft tunnel watertight no Is it fitted with a watertight door no worked from no
If vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes
Air Compressors, No. two No. of stages two diameters 20/200 stroke 115 driven by steam engine
Auxiliary Air Compressors, No. one No. of stages one diameters 115 stroke 170 driven by diesel motor
Provision is made for first charging the air receivers Compressor incorporated in hand started diesel motor
Suctioning Air Pumps, No. Blowers two diameter stroke driven by main motor
Auxiliary Engines crank shafts, diameter as per Rule No. three 2 diesel motor 1 steam engine
If auxiliary engines are constructed under special survey no Is a report sent herewith Yes

SW
1/9/49

AIR RECEIVERS:—Have they been made under survey... *Yes* ✓ State No. of report or certificate... *697*
 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. *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. *two* ✓ Total cubic capacity... *20.6 m³* Internal diameter... *1400* thickness... *21*
 Seamless, welded or riveted longitudinal joint... *riveted* Material... *S.M. steel* Range of tensile strength... *45-55* Working pressure... *Actual 2.5*

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... *no*
PLANS. Are approved plans forwarded herewith for shafting... *Yes* ✓ Receivers... *Yes* ✓ Separate fuel tanks... *no*
 Donkey boilers... *Yes* ✓ General pumping arrangements... *Yes* ✓ Pumping arrangements in machinery space... *Yes* ✓
 Oil fuel burning arrangements... *Yes* ✓
 Have Torsional Vibration characteristics been approved... *Yes* ✓ Date of approval... *24-8-45*

SPARE GEAR.

Has the spare gear required by the Rules been supplied... *Yes* ✓
 State the principal additional spare gear supplied...

The foregoing is a correct description, *Witness* **S. A. JOHN COCKERILL** Manufacturer. **SERAING**

Dates of Survey while building: During progress of work in shops - *1945: July 9, 1946: July 30, 1948: Mar 23, 26, Apr 6, 13, May 7, June 1, 4, 8, 25, 29, July 16,*
 During erection on board vessel - *1948: Jan 12, Feb 2, Mar 4, 5, 18, April 2, 3, Aug 17, 25, Sept 4, 22, 27, Oct 22, 29, Nov 8, Dec 19,*
1949: Jan 6, 21, Feb 9, 16, Mar 4, 12, 12, 14, 22, 23, 28, 29, Apr 1, 5, 6, 7, 9, 11, 12, 14, 15, 21, 26, 28, 30, May 2, 4, 4, 5,
 Total No. of visits... *59*
 Dates of examination of principal parts: Cylinders... *1, 4, 8, 25, 29* Covers... *11, 47* Pistons... *1, 4, 8, 25, 29* Rods... *1, 4, 8* Connecting rods... *4, 48*
 Crank shaft... *16-3-48* Flywheel shaft... — Thrust shaft... *19-3-48* Intermediate shafts... *6-7-78* Tube shaft... —
 Screw shaft... *6-4-48* Propeller... *25-3-46* Stern tube... *28-1-48* Engine seatings... *2, 49* Engine holding down bolts... *4, 49*
 Completion of fitting sea connections... *4, 49* Completion of pumping arrangements... *3, 49* Engines tried under working conditions... *28-4*
 Crank shaft, material... *S.M. steel* Identification mark... *C.L. Cut.* Flywheel shaft, material... — Identification mark... *C.L. Cut.*
 Thrust shaft, material... *S.M. steel* Identification mark... *Nº 151* Intermediate shafts, material... *S.M. steel* Identification marks... *Nº 15*
 Tube shaft, material... — Identification mark... — Screw shaft, material... *S.M. steel* Identification mark... *Nº 196*
 Identification marks on air receivers... *Cº 17193, 697, LLOYD'S TEST, T.P., W.P., C.V., DATE, 40 NOV, 35 NOV*

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... *Mach. space: one portable CO₂ foam apparatus 136 lit. two CO₂ app. 50 lit. throughout vessel. 20 CO₂ foam app. to lit. 22 fire hose connection*
 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.) *The machinery of this vessel has been constructed under the survey of the Germanischer Lloyd's and the Society's surveyors and installed in the vessel under the supervision of the Society's surveyors to the approved plans and the Decree of the Society's surveyors. The machinery parts not constructed under the survey of the Society's surveyors have been examined and found to be in good condition and in accordance with the approved plans. On completion of the installation a full power sea trial was carried out with satisfactory results.*

The machinery of this vessel is eligible, in my opinion, for the record in the Register Book of *L.M.C. 549; DB 170 lbs/pq. in and 7.5*
 The amount of Entry Fee ... £ :
 Special ... *2, 3620.-* : When applied for... *28 1949*
 Donkey Boiler Fee... *2, 4240.-* : When received... *19*
 Travelling Expenses (if any) *2, 10500.-*
 Committee's Minute... *FRI. 9 SEPT 1948*
 Assigned... *L.M.C. 549*



Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.