

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 13308

-6 NOV 1934

Received at London Office

Port of AmsterdamDate of writing Report 20 Oct 1934 When handed in at Local Office

19

Date, First Survey 29 Sept 23 Last Survey 23 Oct 1934No. in Survey held at Hengelo & AmsterdamNumber of Visits 6

Reg. Book.

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

"BLOEMFONTEIN"

Tons { Gross 10075.49  
Net 6155.15Built at AmsterdamBy whom built N.V. Nederl. Scheepbouw M<sup>r</sup> Yard No. 228 When built 1934Engines made at HengeloBy whom made Gebr. Stork & Co Engine No. 3640 When made 1934Donkey Boilers made at Amman SchiedamBy whom made Lockman & Co Boiler No. 12607 When made 1934Brake Horse Power 2 x 4150Owners Konink. Nederl. Scheepvaart M<sup>r</sup> Port belonging to is Grooten hageNom. Horse Power as per Rule 2334Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yesTrade for which vessel is intended Holland - South AfricaHigher inspectionOIL ENGINES, &c. Type of Engines Stroke Huisman bel inf 2 or 4 stroke cycle 2 Single or double acting doubleMaximum pressure in cylinders 45 kg/cm<sup>2</sup> Diameter of cylinders 600 mm Length of stroke 1100 mm No. of cylinders 6 x 2 No. of cranks 6Mean Indicated Pressure 5.5 kg/cm<sup>2</sup> Is there a bearing between each crank yesSpan of bearings, adjacent to the Crank, measured from inner edge to inner edge 845 mm Kind of fuel used Crude oilRevolutions per minute 122 Flywheel dia. 2400 mm Weight 5560 kg Means of ignition sparkCrank Shaft, dia. of journals as per Rule approved Crank pin dia. 420 mm Crank Webs Mid. length breadth 1190 mm Thickness parallel to axis shrunkFlywheel Shaft, diameter as per Rule approved Intermediate Shafts, diameter as fitted 337 mm Thrust Shaft, diameter at collars as per Rule approvedTube Shaft, diameter as per Rule approved Screw Shaft, diameter as fitted 384 mm Is the { tube } shaft fitted with a continuous liner { no }Bronze Liners, thickness in way of bushes as per Rule approved Thickness between bushes as per rule approved Is the after end of the liner made watertight in thepropeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner yesIf 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 yesIf two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of the tubeshaft yes If so, state type Cedewall Length of Bearing in Stern Bush next to and supporting propeller 1550 mmPropeller, dia. 4250 Pitch 4450 mm No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 5.35 M<sup>2</sup> sq. feetMethod of reversing Engines As driven Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubricationFacing all lubricated Thickness of cylinder liners 10 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged withnon-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine funnelCooling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yesBilge Pumps worked from the Main Engines, No. 1 Diameter 200 mm Stroke 140 mm Can one be overhauled while the other is at work yesPumps connected to the Main Bilge Line { No. and Size 1-110 ton/hr self-priming centrifugal pump 1-110 ton/hr ballast pumpsHow driven Electric driven Are the Bilge Suctions in the Machinery Spacesthe 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 pumpingarrangements yes Are the Bilge Suctions in the Machinery Spacesballast Pumps, No. and size One = 2 x 7" x 7 1/2" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3 20 ton/hr pumps 40 ton/hrAre two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size: In Machinery Spaces 6" 3" 4 inch 6" 1 coffee dam 3" 1 1/2 inch 2" 3" and 1" 2" In Pump Room yesHolds, &c. N<sup>o</sup> 1 = 1 x 3" N<sup>o</sup> 2 = 2 x 3" N<sup>o</sup> 3 = 2 x 3" N<sup>o</sup> 4 = 2 x 3" Hold N<sup>o</sup> 5 = 3 x 3" N<sup>o</sup> 6 = 2 x 3" Cofferdam 1 x 3"Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 4-6"Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spacesfrom easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yesAre all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Valves & cocksAre they fixed sufficiently 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 lineAre 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 yesHow are they protected yes Have they been tested as per Rule yesWhat pipes pass through the bunkers none Have they been tested as per Rule yesWhat pipes pass through the deep tanks none a pipe tunnel is fitted Have they been tested as per Rule yesAre 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

apartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight doors yes worked from main deck

On 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 4 1/2" x 11" Stroke 8" Driven by ElectricAuxiliary Air Compressors, No. 2 No. of stages 2 Diameters 3 1/2" x 1 3/4" Stroke 2 3/4" Driven by ElectricSmall Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 3 1/2" x 1 3/4" Stroke 2 3/4" Driven by Main engineScavenging Air Pumps, No. 1 for each engine Diameter 1450 mm Stroke 950 mm Driven by Main engineAuxiliary Engines crank shafts, diameter as per Rule as fitted 100 mm



**AIR RECEIVERS:**—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*

**High Pressure Air Receivers, No.**

Cubic capacity of each *500 litres*

Internal diameter *1600 mm*

thickness *25 mm*

Seamless, lap welded or riveted longitudinal joint *Seamless*

Material *SM S*

Range of tensile strength *28-22 ton*

Working pressure *25 kg/cm<sup>2</sup>*

by Rules *Actual*

**Starting Air Receivers, No.**

Total cubic capacity *204 each*

Internal diameter *1600 mm*

thickness *25 mm*

Seamless, lap welded or riveted longitudinal joint *Seamless*

Material *SM S*

Range of tensile strength *28-22 ton*

Working pressure *25 kg/cm<sup>2</sup>*

by Rules *Actual*

**IS A DONKEY BOILER FITTED?** *2*

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only? *Yes*

**PLANS.** Are approved plans forwarded herewith for Shafting *11-9-34 2-7-24*

(If not, state date of approval)

Receivers *9-11-33*

Separate Tanks *3-11-33*

Donkey Boilers *attached*

General Pumping Arrangements *29-9-33*

Oil Fuel Burning Arrangements *29-9-33*

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *as per attached list*

The foregoing is a correct description,

**Machinefabriek GEER. STORK & Co. N.V.**

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1933. Sept 29. Oct 12. Nov 3. 9. 16. 23. 30 Dec 4. 14. 21. 28 1934. Jan 3. 9. 11. 18. 26. 30. 31 Feb 2. 5. 8. 12. 19. 23. 28. March 2. 7. 9. 16. April 4. 6. 12. 16. 19. 23. 24. 27 May 3. 4. 28  
During erection on board vessel - May 25. 28. June 2. 11. 16. 20. 21. July 6. 10. 16. 20. 23. 27 Aug 2. 8. 14. Sept 11. 22. Oct 9. 11. 15. 18. 23  
Total No. of visits *67*

Dates of Examination of principal parts—Cylinders *26-1-34, 23-2-34* Covers *23-2-34* Pistons *2-2-34* Rods *2-2-34* Connecting rods *2-2-34*

Crank shaft *1-1-34* Flywheel shaft *✓* Thrust shaft *21-11-33* Intermediate shafts *2-6-34* Tube shaft *✓*

Screw shaft *7-12-33, 2-10-34* Propellers *October 2* Stern tube *May 11. June 2* Engine seatings *July 6. 27* Engines holding down bolts *Aug. 2. 22*

Completion of fitting sea connections *11 June* Completion of pumping arrangements *22 Aug.* Engines tried under working conditions *9-10 October*

Crank shaft, Material *SM S* Identification Mark *1062-63 F.B. 14.12.33* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *SM S* Identification Mark *10212-13 M.B. 5-1-34* Intermediate shafts, Material *SM S* Identification Marks *as per attached list*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *SM S* Identification Mark *4040'S 769-70 F.N.B. 7-12-33*

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*

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 *✓*

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 *MS "ALANKERK" tons up to 13156*

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

*The Machinery has been made in accordance with the rules. Secretary's letter and approved plans, workmanship throughout good*

*Period Machinery, pumps, aux. compressors and valve valves (fitted with mechanically operated distance controls) whilst on a trial trip on the North Sea found working good*

*Auxiliary compressor which does not require compressed air for starting up the first charging of the air receivers is placed aboard*

*He is eligible in my opinion, for the approval of the Committee to be claimed*

*4 MC. 10-34*

The amount of Entry Fee *£ 72 -*

Special *£ 1900 -*

Donkey Boiler Fee *£ 75.60*

Travelling Expenses (if any) *£ 205 -*

When applied for,

19 *July*

When received,

3.12

19 *34*

*6/12*

Committee's Minute

*FRI, 16 NOV 1934*

Assigned

*+ Linc 10.34 2 DB - 120 lb.*

CERTIFICATE WRITTEN

*Oil. Eng. 09.*

*Burgdorff*

Engineer Surveyor to Lloyd's Register of Shipping.



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