

REPORT ON OIL ENGINE MACHINERY.

No 19170

Date of writing Report **15-8-1950** When handed in at Local Office **15-8-1950** Port of **West Hartlepool**
 Received at London Office **16 AUG 1950**
 No. in Survey held at **West Hartlepool** Date, First Survey **16th December, 1949**, Last Survey **21st July, 1950.**
 Reg. Book. Number of Visits **45.**

Single on the **Triple** Screw vessel **ALTAIR** Tons: Gross **6410** Net **3749**
 Built at **West Hartlepool** By whom built **Wm. Gray + Co.** Yard No. **1236** When built **1950**
 Engines made at **Engelo** By whom made **Gebr. Stork + Co.** Engine No. **5650** When made **1949**
 Donkey Boilers made at **—** By whom made **—** Boiler No. **—** When made **—**
 Brake Horse Power **3200** Owners **Niewelt Goudriaan** Port belonging to **Rotterdam**
 Nom. Horse Power as per Rule **796^{MN}** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**
 Trade for which vessel is intended **Coson going**

II ENGINES, &c.—Type of Engines **2 S.C.S.A. Stork Hesselman.** 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, adjacent to the Crank, measured from inner edge to inner edge **—** Is there a bearing between each crank **—**
 Revolutions per minute **—** Flywheel dia. **—** Means of ignition **—** Kind of fuel used **—**
 Crank Shaft, { Solid forged dia. of journals as per Rule as fitted } **See Amsterdam Rpt. No. 16864** Crank pin dia. **—** Crank Webs { Mid. length breadth shrunk Thickness parallel to axis } **—** { Mid. length thickness } **—** { Thickness around eyehole } **—**
 Flywheel Shaft, diameter as per Rule as fitted **—** Intermediate Shafts, diameter as per Rule as fitted **12.3"** Thrust Shaft, diameter at collars as per Rule as fitted **12.91"**
 Tube Shaft, diameter as per Rule as fitted **—** Screw Shaft, diameter as per Rule as fitted **13.55"** Is the { tube screw } shaft fitted with a continuous liner **Yes**
 Bronze Liners, thickness in way of bushes as per Rule as fitted **.71"** Thickness between bushes as per Rule as fitted **.5325** Is the after end of the liner made watertight in the propeller boss **Yes** **.866** **.669**

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 **—** Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft **No** If so, state type **—** Length of Bearing in Stern Bush next to and supporting propeller **4'-7.7"**

Propeller, dia. **15'-0"** Pitch **12.3'** No. of blades **4** Material **Brongze** whether Moveable **No** Total Developed Surface **80.5** sq. feet
 Method of reversing Engines **—** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **—** Means of lubrication **—**
 Thickness of cylinder liners **—** Are the cylinders fitted with safety valves **—** Are the exhaust pipes and silencers water cooled or lagged with non-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 **—**

Cooling Water Pumps, No. **Two - 1 working FW. also 2nd SW.** 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. **—** Diameter **—** Stroke **—** Can one be overhauled while the other is at work **—**
 Pumps connected to the Main Bilge Line { No. and Size **(4) in (1 - Ballast / 140T/HR) (1 - Bilge 100T/HR) (1 - Aux. Bilge 25T/HR) (1 - SOS pump 3")** How driven **Electre**

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 size **one - 140T/HR. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **Two - 1 working 96T/HR****
 Are two independent means arranged for circulating water through the Oil Cooler **Yes** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size **3" - port fwd. 3" - port aft. 3" - thru stern 2 1/2" - aft. 2 1/2" - thru tunnel.**

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **(3" - No. 1 hold S) (3" - No. 2 hold S) (3" - No. 3 hold S) (3" - No. 4 hold S) (3" - No. 5 hold S) (3" - No. 6 hold S) (3" - No. 7 hold S) (3" - No. 8 hold S) (3" - No. 9 hold S) (3" - No. 10 hold S)**
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **Yes** Are the Bilge Suctions in the Machinery Spaces **Yes**
 Are all Sea Connections fitted direct on the skin of the ship **Yes** Are they fitted with Valves or Cocks **Yes**
 Are 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 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 fitted**
 That pipes pass through the bunkers **None** How are they protected **—**
 That 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 **Yes** Is it fitted with a watertight door **Yes** worked from **Upper 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. **Two** No. of stages **2** Diameters **10 1/2" - 4 3/4"** Stroke **8"** Driven by **blotch driven from generator engine**
 Auxiliary Air Compressors, No. **one** No. of stages **2** Diameters **2 3/4" - 1 1/2"** Stroke **3"** Driven by **blotch driven from Aux. generator engine**
 Small Auxiliary Air Compressors, No. **one** No. of stages **—** Diameters **—** Stroke **—** Driven by **Hand.**

That provision is made for first Charging the Air Receivers **Main compressors.**
 scavenging Air Pumps, No. **Two** Diameter **Rotary type.** Stroke **—** Driven by **Main engine**
 Auxiliary Engines crank shafts, diameter as per Rule as fitted **See Amsterdam Rpt. No. 16957** Position **—**

Have the Auxiliary Engines been constructed under special survey **Yes** Is a report sent herewith **Yes**



AIR RECEIVERS: — Have they been made under survey? *Yes* ✓ State No. of Report or Certificate *Amsterdam Cert. No. C.219*
 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 - two*
Injection Air Receivers, No. *—* Cubic capacity of each *—* Internal diameter *—* thickness *—*
 Seamless, lap welded or riveted longitudinal joint *—* Material *—* Range of tensile strength *—* Working pressure *—*
Starting Air Receivers, No. *Two* ✓ Total cubic capacity *14 cub. metres* Internal diameter *1346 mm.* thickness *27 mm.*
 Seamless, lap welded or riveted longitudinal joint *Butt welded* Material *Steel* Range of tensile strength *26-30T.* Working pressure *—*
 by Rules *—* Actual *30KG/cm².*

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 *yes* Receivers *—* Separate Fuel Tanks *yes*
 (If not, state date of approval) Donkey Boilers *—* General Pumping Arrangements *yes* Pumping Arrangements in Machinery Space *yes*
 Oil Fuel Burning Arrangements *—*

SPARE GEAR.

Has the spare gear required by the Rules been supplied? *Yes* ✓
 State the principal additional spare gear supplied *Spare screw hoist*

*T.V.C. app^d 23/2/49 for 115hp
 provided engine w^t run continuously
 below 33 rpm.*

The foregoing is a correct description.

FOR THE CENTRAL MARINE ENGINE WORKS,
 (In City & Co. 30)

Manufacturer.

Dates of Survey while building: During progress of work in shops -- *1949. Dec. 16. 19. 22. 28. 1950. Jan. 4. 6. 10. 12. 13. 18. 20. 24. 25. Feb. 1. 8. 13. 21. 24. 27. March 6. 8. 17. 20. 22. 23. 27. 28. April 12. 18. May 1. 2. 9. 12. 17. 25. June 1. 21. 22. July 5. 10. 11. 12. 13. 21.*
 During erection on board vessel -- *—*
 Total No. of visits *45*

Dates of Examination of principal parts—Cylinders *—* Covers *—* Pistons *—* Rods *—* Connecting rods *—*
 Crank shaft *21-2-50* Flywheel shaft *—* Thrust shaft *—* Intermediate shafts *6-3-50* Tube shaft *—*
 Screw shaft *8-3-50.* Propeller *27-3-50.* Stern tube *17-3-50* Engine seatings *18-4-50* Engines holding down bolts *22-6-50.*
 Completion of fitting sea connections *1-2-50.* Completion of pumping arrangements *13-7-50.* Engines tried under working conditions *10-7-50.*

Crank shaft, Material *—* Identification Mark *—* Flywheel shaft, Material *—* Identification Mark *—*
 Thrust shaft, Material *S.M. Steel* Identification Mark *355* Intermediate shafts, Material *S.M. Steel* Identification Marks *2526-31.*
 Tube shaft, Material *—* Identification Mark *—* Screw shaft, Material *S.M. Steel* Identification Mark *2524 CP. 5-8.*
 Identification Marks on Air Receivers: *No. 5104* *No. 5105*
LLOYDS TEST. *LLOYDS TEST.*
49 KGS/cm². *49 KGS/cm².*
WP. 30 KGS/cm². *WP. 30 KGS/cm².*
KK. 21-8-47 *KK. 21-8-47.*

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 *Foam, tetrochloride, hose connectors in engine room + 30L. fire extinguisher connected into M.E. anchor pipes.*
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo? *Yes - diesel fuel* If so, have the requirements of the Rules been complied with? *Yes* ✓
 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 now been satisfactorily installed and secured. Pumping arrangements tested and found satisfactory. Machinery tried under normal working conditions alongside and at sea with satisfactory results. Stopping and starting trials satisfactorily carried out.*
*This machinery is in our opinion eligible for notation * LMC. 611 engine 7-50.*

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

3/4 MN.
 The amount of Entry Fee .. £ *78* : *1* -
 Special £ : :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *15-8-1950.*
 When received, *—*

John Linday + Whig later
 Engineer/Surveyors to Lloyd's Register of Shipping.

Committee's Minute **FRI. 1 SEP 1950**

Assigned *+ LMC 7.50 Oil Eng.*
C.L. (with endorsement)

