

REPORT ON OIL ENGINE MACHINERY.

No. 18620

Received at London Office 5 OCT 1933
Date of writing Report 3rd Oct. 33, When handed in at Local Office 4. 10. 33, Port of Grimsey
No. in Survey held at Lincoln Date, First Survey 31st March Last Survey 2nd Oct. 1933
Reg. Book. Number of Visits 52

on the Single Screw vessel N/V "ISIPINGO" Tons { Gross 7069.15
Twin Triple Net 4311.63
Quadruple
Built at Belfast By whom built Warkman Clark (1928) Ltd Yard No. 530 When built 1933
Engines made at do By whom made do Engine No. 530 When made 1933
Two Engines made at Lincoln By whom made Ruston & Hornsby, Ltd. Eng. No. 169213, 14, 15 & 16 When made 1933
Indicated Horse Power 150 each Owners Messrs Andrew Weir & Co. Port belonging to Belfast
Nom. Horse Power as per Rule 31 each Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes
Made for which vessel is intended [Four Aux. engines. Type 5 V.C.R.Z.]

ENGINES, &c.—Type of Engines Airless injection, cold starting 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 650 lbs. Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 5 No. of cranks 5
Indicated Pressure 70 lbs.

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8" Is there a bearing between each crank yes
Revolutions per minute 600 Flywheel dia. 3'-4" Weight 17 1/2 cwt Means of ignition Compression Kind of fuel used crude oil
Crank Shaft, dia. of journals as approved Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis shrunk
as fitted 6" Mid. length thickness 2 1/2" Thickness around eye hole shrunk

Wheel Shaft, diameter as per Rule ✓ Intermediate Shafts, diameter as per Rule ✓ Thrust Shaft, diameter at collars as per Rule ✓
as fitted ✓ as fitted ✓ as fitted ✓

Propeller Shaft, diameter as per Rule ✓ Screw Shaft, diameter as per Rule ✓ Is the tube screw shaft fitted with a continuous liner ✓
as fitted ✓ as fitted ✓

Oil Liners, thickness in way of bushes as per Rule ✓ Thickness between bushes as per rule ✓ Is the after end of the liner made watertight in the
as fitted ✓ as fitted ✓

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 ✓ Is an approved Oil Gland or other appliance fitted at the after end of the tube ✓

If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller ✓

Propeller, dia. ✓ Pitch ✓ No. of blades ✓ Material ✓ whether Moveable ✓ Total Developed Surface ✓ sq. feet

Method of reversing Engines none Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication ✓

Thickness of cylinder liners 3/4" Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with ✓

conducting material water If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

Working Water Pumps, No. 1 Bronze centrifugal Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Other 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 ✓
How driven ✓

Is 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 ✓

Fast Pumps, No. and size ✓ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one geared

Two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge ✓

Pumps, No. and size:—In Machinery Spaces ✓ In Pump Room ✓

Olds, &c. ✓

Independent Power Pump Direct 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 Suctions in the Machinery Spaces ✓

Are they 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 ✓

Are pipes pass through the bunkers ✓ How are they protected ✓

Are pipes pass through the deep tanks ✓ 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 ✓

arrangement to another ✓ Is the Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

Is the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Engining Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓
as fitted ✓

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. *1* Cubic capacity of each *11.2 Cubic feet* Internal diameter *2'-0"* thickness *1/16"*
Seamless, lap welded or riveted longitudinal joint *Seamless* Material *steel* Range of tensile strength *26/30* Working pressure by Rules *325 lbs.*
Starting Air Receivers, No. *one.* Total cubic capacity *11.2 Cubic feet* Internal diameter *2'-0"* thickness *1/16"*
Seamless, lap welded or riveted longitudinal joint *Seamless* Material *steel* Range of tensile strength *26/30* Working pressure by Rules *325 lbs.*
Actual *300 lbs.*

IS A DONKEY BOILER FITTED? *None.* 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 *11.11.32.* Receivers *15.2.33* Separate Tanks ☒
(If not, state date of approval)
Donkey Boilers ☒ General Pumping Arrangements ☒ Oil Fuel Burning Arrangements ☒

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes.*
State the principal additional spare gear supplied *one cylinder cover complete with studs, joints & pipe connections, 2 pairs of bolt end brasses, 1 cylinder liner, 2 sets of springs of each kind fitted, & etc.*

Kuston & Hornsby, Limited,

The foregoing is a correct description,

R. Oudous 2/10/33 Manufacturer.
Eng & Gen Engine Dock

Dates of Survey while building
During progress of work in shops -- *1/933 Mar 31. Apr 3. 5. 7. 10. 13. 18. 20. 24. 27. May 1. 2. 4. 8. 11. 15. 18. 22. 25. 29. Jun 1. 6. 7. 12. 15. 19. 22. 26. 30. Jul 3. 6. 10. 13. 17. 20. 24. 27. Aug 8. 10. 14. 17. 29. 31.*
During erection on board vessel -- *Apr 11. 14. 18. 21. 25. 28. Oct 2*
Total No. of visits *52.*

Dates of Examination of principal parts—Cylinders *20.4.33, 20.7.33* Covers *20.7.33* Pistons *8.5.33.* Rods ☒ Connecting rods *20.4.33*
26.6.33, 15.6.33. Flywheel shaft ☒ Thrust shaft ☒ Intermediate shafts ☒ Tube shaft ☒
Crank shaft *6.7.33, 17.7.33.* Flywheel shaft ☒ Thrust shaft ☒ Intermediate shafts ☒ Tube shaft ☒
Screw shaft ☒ Propeller ☒ Stern tube ☒ Engine seatings ☒ Engines holding down bolts ☒
Completion of fitting sea connections ☒ Completion of pumping arrangements ☒ Engines tried under working conditions *14.9.33.*
Crank shaft, Material *sm. steel* Identification Mark *3162C, D, E + F* Flywheel shaft, Material ☒ Identification Mark ☒
Thrust shaft, Material ☒ Identification Mark ☒ Intermediate shafts, Material ☒ Identification Marks ☒
Tube shaft, Material ☒ Identification Mark ☒ Screw shaft, Material ☒ Identification Mark ☒

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? ☒
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 workmanship & materials are good.*

The engines have been built under Special Survey in accordance with the Rules Approved plans.

Running trials were carried out at the makers works & all found satisfactory. The engines have been despatched to Belfast where they will be fitted on board by Messrs Workman Clark & Co.

The amount of Entry Fee .. £ : : When applied for, *4.10.33*
Special ... £ *21* : - :
Donkey Boiler Fee ... £ : : When received, *2.8.34*
Travelling Expenses (if any) £ : :
Committee's Minute *See Bel L.E. 11226*
Assigned *See Bel L.E. 11226*