

REPORT ON OIL ENGINE MACHINERY.

No. 13022

7 SEP

Received at London Office

AMSTERDAM

Port of

When handed in at Local Office

Survey held at AMSTERDAM

Date, First Survey 10 January Last Survey 15 April 1933

Number of Visits 4

on the ~~XXX~~ ~~XXXX~~ Screw vessel "ZWARTE ZEE"

Tons { Gross -
Net -

at Kinderdijk By whom built L.Smit & Zoon Yard No. 872 When built 1933
made at Amsterdam By whom made Werkspoor N.V. Engine No. - When made 1933
Boilers made at - By whom made - Boiler No. - When made -
Horse Power 3000 Owners N.V.L.Smit & Co's Sleepdienst Port belonging to Rotterdam
Horse Power as per Rule 456 453 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
for which vessel is intended For towing services

ENGINES, &c.—Type of Engines *Werkspoor Super charged 2 or 4 stroke cycle* Single or double acting
pressure in cylinders *400 lb.* Diameter of cylinders *19 1/4 500 mm* Length of stroke *25 7/8 650 mm* No. of cylinders *6x2* No. of cranks *6*
bearings, adjacent to the Crank, measured from inner edge to inner edge *630 mm* Is there a bearing between each crank *yes*
rpm *245* Means of ignition *Mechanical* Kind of fuel used *Diesel fuel*
Shaft, dia. of journals *as per Rule approved 320 mm* Crank pin dia. *320 mm* Crank Webs *Mid. length breadth 560 mm* Thickness parallel to axis *260 mm*
as fitted *320 mm* *Mid. length thickness 165 mm* Thickness around eye hole *2*
Intermediate Shafts, diameter *as per Rule approved 305 mm* Thrust Shaft, diameter at collars *as per Rule approved 340 mm*
Screw Shaft, diameter *as per Rule approved 350 mm* Is the tube shaft fitted with a continuous liner *yes*

Liners, thickness in way of bushes *as per Rule 4* Thickness between bushes *as per rule 4* Is the after end of the liner made watertight in the boss *4*
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *4*
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 *4*
Liners are fitted, is the shaft lapped or protected between the liners *4* Is an approved Oil Gland or other appliance fitted at the after end of the tube *4*

er, dia. *4100 mm* Pitch *1448* No. of blades *4* Material *Brass* whether Moveable *Solid* Total Developed Surface *42* sq. feet
of reversing Engines *air start motor* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication *4*
Thickness of cylinder liners *45 mm* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged with *4*

Water Pumps, No. *2 salt and fuel water* Is the sea suction provided with an efficient strainer which can be cleared within the vessel *yes*
Pumps worked from the Main Engines, No. *one* Diameter *140 mm* Stroke *120 mm* Can one be overhauled while the other is at work *yes*
connected to the Main Bilge Line { No. and Size *one 10 tons per hour* *one 30 tons*
How driven *Driven from intermediate shaft* *electric driven*

Pumps, No. and size *one 10 tons per hour* Lubricating Oil Pumps, including Spare Pump, No. and size *4 of 40 tons capacity p.h.*
independent means arranged for circulating water through the Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge *4*
No. and size:—In Machinery Spaces *5 of 2 1/2"*
s, &c. *2 of 1 1/2" each*

endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *one 3"*
the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* Are the Bilge Suctions in the Machinery Spaces *4*
easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges *yes*

Sea Connections fitted direct on the skin of the ship *yes* Are they fitted with Valves or Cocks *Both*
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 *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 *4* How are they protected *4*
pipes pass through the deep tanks *4* Have they been tested as per Rule *4*

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 spaces, or from one *4*
ment to another *yes* Is the Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *upper deck*

and vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *4*
Air Compressors, No. *4* No. of stages *4* Diameters *4* Stroke *4* Driven by *4*
ry Air Compressors, No. *Two* No. of stages *2* Diameters *150 mm* Stroke *R.P.M. 450* Driven by *electric driven*

Auxiliary Air Compressors, No. *1* No. of stages *2* Diameters *50 mm* Stroke *per hour* Driven by *hand*
ing Air Pumps, No. *two* Diameter *1000 mm* Stroke *380 mm* Driven by *crankshaft*

ry Engines crank shafts, diameter *as per Rule approved 150 mm*
as fitted *150 mm*

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*
internal surfaces of the receivers be examined *yes* What means are provided for cleaning their inner surfaces *manhole*
a drain arrangement fitted at the lowest part of each receiver *yes*

Pressure Air Receivers, No. *one* Cubic capacity of each *120 litres* Internal diameter *302 mm* thickness *8 mm*
lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *50-55 tons* Working pressure by Rules *700 lb.*

g Air Receivers, No. *2* Total cubic capacity *12 m³* Internal diameter *1095 mm* thickness *19 mm*
lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *50-55 tons* Working pressure by Rules *400 lb.*

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

PLANS. Are approved plans forwarded herewith for Shafting *See Plans*

(If not, state date of approval) *16.11.33*

Receivers *See*

Separate Tanks *London*

Donkey Boilers *✓*

General Pumping Arrangements *See Plans*

Oil Fuel Burning Arrangements *London*

SPARE GEAR

Spare gear completely supplied also for auxiliary

auxiliaries fitted:

1. main dynamo's 85 K.W.

1. main dynamo's 45 K.W.

Dutch oil engine fitted in Rotterdam for 4 P.

2. air compressors 130 m³/hour

2. salt water cooling pumps 150 tons per hour

2. fresh " " 40 " " "

2. lub. oil pumps 40 " " "

2. " " gear box 48 " " "

1. alk. water pump 20 m³ " " "

1. bilge pump 40 " " "

1. fuel transfer pump 20 " " "

The foregoing is a correct description,

WERKSPOR N.V.

W. J. Spring

Manufacturer.

Dates of Survey while building
During progress of work in shops--
During erection on board vessel--
Total No. of visits *44*

Dates of Examination of principal parts—Cylinders *20/1 - 25/3* Covers *20/1 - 25/3* Pistons *24/1 - 25/3* Rods *24/1 - 25/3* Connecting rods *10/1 - 15/3*

Crank shaft *made in Germany* Flywheel shaft *✓* Thrust shaft *1545 S.R. Geom., vulcan coupling* Intermediate shafts *20/1 - 19/5 ss.* Tube shaft *✓*

Screw shaft *19-5 ss.* Propeller *19-5 ss.* Stern tube *19-5 ss.* Engine seatings *10/4* Engines holding down bolts *10/4 - 15/3*

Completion of fitting sea connections *Rotterdam Ref.* Completion of pumping arrangements *22/8* Engines tried under working conditions *22/8*

Crank shaft, Material *Steel* Identification Mark *1486 K.H. 11.3.33* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *Steel* Identification Mark *1545 S.R. 6.1.33* Intermediate shafts, Material *Steel* Identification Marks *425 F.H.B. 1, 424 F.H.B. 1, 347 F.H.B. 1*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Steel* Identification Mark *348 F.H.B. 1, 349 F.H.B. 1*

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 *✓*

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 has been made in accordance with the Rules, Society's letter and approved plans. All material tested as required and workmanship good. The engines have been tested under full working condition and good. The vessel is in my opinion eligible to be Classed + L.M.C. 8.33.

The amount of Entry Fee ... *£ 42.-*

Special ... *£ 120.-*

Donkey Boiler Fee ... *£ 100.80*

Travelling Expenses (if any) *£ 40.-*

Committee's Minute *FRI. 20 OCT 1933*

Assigned

+ L.M.C. 9.33

O.G.

When applied for,

19

When received,

19

P. V. Bernoski
Engineer Surveyor to Lloyd's Register of Shipping.



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