

REPORT ON OIL ENGINE MACHINERY.

No. 2955

14 MAR 1929

Received at London Office

Date of writing Report 11 May 1928. When handed in at Local Office

Port of Stockholm

No. in Survey held at Sickla, Skm. Distr.

Date, First Survey 27 May 1927 Last Survey 8 May 1928.

Reg. Book.

Number of Visits 7

on the ~~Single~~ ^{Twin} Screw vessels Steel Twin L. "HERBJÖRN"Tons: Gross 8038
Net 476

Built at Gothenburg

By whom built Akkiesbol. Götaverken

Yard No. 415 When built 1928

Engines made at Stockholm

By whom made Akkiesbol. Atlas Diesel

Engine No. 80184 When made 1928

Donkey Boilers made at

By whom made SHIBS 9/5 HERBJÖRN

Boiler No. When made 1928

Brake Horse Power 100

Owners Rederiet Akkiesbol. Transeil

Port belonging to Gothenburg

Nom. Horse Power as per Rule 46

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

OIL ENGINES, &c.

Type of Engines

Stationary Diesel Oil Engine (Type 2H29)

2 stroke cycle

Single or double acting

Maximum pressure in cylinders

35 kg/cm²

No. of cylinders

2

Diameter of cylinders

290 mm.

No. of cranks

2

Length of stroke 410 mm.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

984 mm.

Is there a bearing between each crank no

Revolutions per minute

275

Flywheel dia.

1400 mm.

Weight

1185 kg.

Means of ignition

Compression

Kind of fuel used

brude Oil

Crank Shaft, dia. of journals

as per Rule 178 mm.

Crank pin dia.

195 mm.

Crank Webs

Mid. length breadth 260 mm.

Thickness parallel to axis

shrunk

Flywheel Shafts, diameter

as fitted

Intermediate Shafts, diameter

as fitted

Thrust Shaft, diameter at collars

as per Rule

as fitted

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the tube screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per rule

Is the after end of the liner made watertight in the

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 shaft 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

Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes

Means of lubrication

pumps

Thickness of cylinder liners none fitted

Are the cylinders fitted with safety valves yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps fitted to 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

Ballast Pumps, No. and size

Lubricating Oil Pumps, including Spare Pump, No. and size

Are 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 Engine and Boiler Room

In Holds, &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 Space

led from 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

What pipes pass through the bunkers

How are they protected

What 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

compartment to another Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

If 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. none fitted

No. of stages

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No.

No. of stages

Diameters

Stroke

Driven by

Scavenging 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 yes

What means are provided for cleaning their inner surfaces woodhole 120 mm.

Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. none fitted

solid injection

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Starting Air Receivers, No.

/ Total cubic capacity

100 litres

Internal diameter

340 mm.

thickness

15 mm.

Seamless, lap welded or riveted longitudinal joint lap welded

Material S. M. Steel

Range of tensile strength

38 kg as a min

Working pressure by Rules

5 kg

cm

G04411-004417-0026

IS A DONKEY BOILER FITTED?
HYDRAULIC TESTS:—

If so, is a report now forwarded?

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	21.3.28.	35 kg/cm ²	80 kg/cm ²	LLOYD'S TEST 80 Kg. A.I. 21.3.28. A	
" " COVERS	(Cover is in one piece with the cylinder)				
" " JACKETS	21.3.28.	-	4 kg/cm ²		
" PISTON WATER PASSAGES	(open pistons)				
MAIN COMPRESSORS—1st STAGE	none fitted				
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING	2.4.28.	50 kg/cm ²	100 kg/cm ²	N:O 5614 LLOYD'S TEST 100 Kg. W.P. 50 Kg. A.I. 2.4.28. A	
" INJECTION					
AIR PIPES					
FUEL PIPES	21.3.28.	300 kg/cm ²	600 kg/cm ²	A	
FUEL PUMPS	21.3.28.	300 "	600 "		
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for Shafting *see Secretary's letter*
(If not, state date of approval) **E. 28.5.25.**

Receivers **E. 25.10.26.**

Separate Tanks

Oil Fuel Burning Arrangements

SPARE GEAR as per list, approved on the 4th. Febr. 1926, will be inspected, when machinery is being fitted in ship. ✓

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops-- 27/5, 29/10, 21/11, 1927; 16.2.28, 2/4, 8/5, 1928.
During erection on board vessel--
Total No. of visits in shop 7.

Dates of Examination of principal parts—Cylinders with Covers 16.2.28 Pistons 21/3, 28 Rods
Crank shaft 29/10, 27/3, 28. 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 in shop 16.3.28.
Crank shaft, Material S.M. Steel Identification Mark LLOYD'S No 8063 Flywheel shaft, Material Identification Mark
Thrust shaft, Material Identification Mark V.B. 29.10.27. A 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.

Is this machinery duplicate of a previous case yes If so, state name of vessel see Skm. Report no. 2923.

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

I am of opinion, that this engine is of superior material and workmanship, and as it has been designed and constructed under Special Survey, I have respectfully to submit that it be approved as auxiliary to a classed main engine.

The amount of Entry Fee ... £ :
Special Survey in Shop & Tr. 28.40 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ : 28.50 :
Total Tr. 246.90

When applied for,

11 May 1928.

When received,

June 28.

Committee's Minute

TUE. 12 MAR 1929

Assigned see Minute on

Gov. Rpt 7428 attached

W. Bakson
Engineer Surveyor to Lloyd's Register of Shipping.
Assisted by Mr. K. J. Anderson.



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Foundation