

REPORT ON OIL ENGINE MACHINERY.

No. 44830

Date of writing Report

19

When handed in at Local Office

28.7.1925

Port of

Received at London Office

-5 AUG 1925

No. in Survey held at
Reg. Book.

Date, First Survey

29.10.23.

Last Survey

27.7.1925

Number of Visits

177

Single
on the Twin
Triple

Screw vessels

M.V. "Himantus"

Tons

Gross

Net

8684

5426

Master

Built at

Greenock

By whom built

W. Hamilton & Co.

Yard No.

389

When built

1925

Engines made at

Glasgow

By whom made

John Brown & Co. Ltd.

Engine No.

601

When made

1925

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power

3000 each set

Owners

Union S.S. Co. of New Zealand

Port belonging to

London

Nom. Horse Power as per Rule

1495

Is Refrigerating Machinery fitted for cargo purposes

yes

Is Electric Light fitted

yes

OIL ENGINES, &c.—Type of Engines

Brown Sulzer

2 stroke cycle

Yes

Single acting

Yes

Maximum pressure in cylinders

500

No. of cylinders

6 each Eng

No. of cranks

6 each Eng

Diameter of cylinders

26.77"

26 3/4"

Length of stroke

47.24"

Revolutions per minute

100

Means of ignition

Compression

Kind of fuel used

Diesel oil

Is there a bearing between each crank

Yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

35.67"

Distance between centres of main bearings

53.15"

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule

As app.

Diameter of crank pins

18.11"

Breadth of crank webs

as per Rule

As app.

as fitted

as per Rule

as fitted

as per Rule

as fitted

as per Rule

as fitted

Diameter of flywheel shaft

as per Rule

as app.

Diameter of tunnel shaft

as per Rule

as app.

as fitted

as per Rule

as app.

as fitted

as per Rule

as app.

as fitted

as per Rule

as fitted

Diameter of screw shaft

as per Rule

as app.

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes

Is the after end of the liner made watertight in the propeller boss

Yes

If the liner is in more than one length are the joints burned

Yes

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

Yes

If two liners are fitted, is the shaft lapped or protected between the liners

Yes

If without liners, is the shaft arranged to run in oil

No

Type of outer gland fitted to stern tube

None

Length of stern bush

5'-3"

Diameter of propeller

16'-6"

Pitch of propeller

15'-0"

No. of blades

4

state whether moveable

Yes

Total surface

84 sq ft

square feet

Method of reversing

Hand

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

Yes

Thickness of cylinder liners

2"

Are the cylinders fitted with safety valves

Yes

Means of lubrication

Forced

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

Silencers lagged

No. of cooling water pumps

4

Is the sea suction provided with an efficient strainer which can be cleared

within the vessel

Yes

No. of bilge pumps fitted to the main engines

One each Eng

Diameter of ditto

7"

Stroke

5 1/2" double acting

Can one be overhauled while the other is at work

Yes

No. of auxiliary pumps connected to the main bilge lines

3

How driven

Steam

Sizes of pumps

General 12" x 12" x 12" Duplex

No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps

In engine room 6" x 3" 2" x 2" 2" x 2"

(Eng room effluents 2" x 2")

and in holds, etc.

1" x 1" 2" x 2" 3" x 3" 4" x 4" 5" x 5" 6" x 6" 7" x 7" 8" x 8" 9" x 9" 10" x 10" 11" x 11" 12" x 12" 13" x 13" 14" x 14" 15" x 15" 16" x 16" 17" x 17" 18" x 18" 19" x 19" 20" x 20" 21" x 21" 22" x 22" 23" x 23" 24" x 24" 25" x 25" 26" x 26" 27" x 27" 28" x 28" 29" x 29" 30" x 30" 31" x 31" 32" x 32" 33" x 33" 34" x 34" 35" x 35" 36" x 36" 37" x 37" 38" x 38" 39" x 39" 40" x 40" 41" x 41" 42" x 42" 43" x 43" 44" x 44" 45" x 45" 46" x 46" 47" x 47" 48" x 48" 49" x 49" 50" x 50" 51" x 51" 52" x 52" 53" x 53" 54" x 54" 55" x 55" 56" x 56" 57" x 57" 58" x 58" 59" x 59" 60" x 60" 61" x 61" 62" x 62" 63" x 63" 64" x 64" 65" x 65" 66" x 66" 67" x 67" 68" x 68" 69" x 69" 70" x 70" 71" x 71" 72" x 72" 73" x 73" 74" x 74" 75" x 75" 76" x 76" 77" x 77" 78" x 78" 79" x 79" 80" x 80" 81" x 81" 82" x 82" 83" x 83" 84" x 84" 85" x 85" 86" x 86" 87" x 87" 88" x 88" 89" x 89" 90" x 90" 91" x 91" 92" x 92" 93" x 93" 94" x 94" 95" x 95" 96" x 96" 97" x 97" 98" x 98" 99" x 99" 100" x 100"

No. of ballast pumps

How driven

Steam

Is a separate auxiliary pump suction fitted in

Yes

Is the ballast pump fitted with a direct suction from the engine room bilges

Yes

State size

3 1/2"

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine Room always accessible

Yes

Engine Room and size

7" Bilge Injection

Are all connections with the sea direct on the skin of the ship

Yes

Are the sluices on Engine Room bulkheads always accessible

Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

Yes

Are they valves or cocks

Both

Are they each fitted with a discharge valve always accessible on the plating of the vessel

Yes

Are the discharge pipes above or below the deep water line

Both

Are the bilge suction pipes, cocks and valves arranged so as to prevent any

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times

Yes

Is it fitted with a watertight door

Yes

communication between the sea and the bilges

Yes

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

worked from upper Deck

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Yes

No. of main air compressors

2 each Eng

No. of stages

3

Diameters

25.19" 22.83" 22.04"

Stroke

Driven by

Grand shaft

No. of auxiliary air compressors

Three

No. of stages

Three

Diameters

Each rated to compress and deliver 205 c feet of free air per min. to 1000 lbs per sq inch.

Stroke

Driven by

Steam

No. of small auxiliary air compressors

None

No. of stages

None

Diameters

Stroke

Driven by

Steam turbine

No. of scavenging air pumps

Two. Rotary Blowers

Diameter

Stroke

Driven by

Steam turbine

Diameter of auxiliary Diesel Engine crank shafts

as per Rule

as fitted

None

Are the air compressors and their coolers made so as to be easy of access

Yes

AIR RECEIVERS:—No. of high pressure air receivers

2 x 2 span

Internal diameter

11 3/4"

Cubic capacity of each

28.32 ton

material

Steel

Seamless, lap welded or riveted longitudinal joint

Solid drawn

Range of tensile strength

28.32 ton

thickness

5/8"

working pressure by Rules

14.68 lbs

No. of starting air receivers

7

Internal diameter

48"

Total cubic capacity

72 214 cub ft each

Material

Steel

Seamless, lap welded or riveted longitudinal joint

Riveted

Range of tensile strength

28.32

thickness

1 1/8"

Working pressure by rules

612

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

Yes

inner surfaces

thru manholes.

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

Yes

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	22.01.25	500	1000 lbs	HC	
" " COVERS		500	1000 "	HC	
" " JACKETS			30 "	HC	
" " PISTON WATER PASSAGES			30 "	HC	
MAIN COMPRESSORS—1st STAGE			145 "	HC	
" 2nd "			425 "	HC	
" 3rd "			2000 "	HC	
AIR RECEIVERS—STARTING		600 lbs	1000 "	16620=307, 16621=207, 16646=207	
" INJECTION		1000 "	2000 "	318, 318, 47813, 41782.	
AIR PIPES		1000 "	2000 "	HC	
FUEL PIPES		1000 "	2000 "	✓	
FUEL PUMPS		1000	2000 "	HC	
SILENCER			lagged		
" WATER JACKET			None		
SEPARATE FUEL TANKS		head only	5 lbs & 7 lbs	200	

PLANS. Are approved plans forwarded herewith for shafting *no. 13.8.23* Receivers *29.4.24.* Separate Tanks *yes*
(If not, state date of approval)

SPARE GEAR *one cyr cover with all valves, valve seats, springs etc, in addition one cyr set of valves, valve seats, springs etc, for one cyr of main engine, 6 fuel needle valves 1. piston complete with piston rod, & skirt, rings, etc, 1. set piston rings for 12 pistons, 1. set main skew wheels for one engine, 2. main bearing bolts for working cyrs, 4. main bearing bolts for compressor, 4. top end & 2. bottom end bolts & nuts for working cyr, 2. bottom end bolts for compressor, 1. set coupling bolts for crank shaft, 1. set valves for comp; 1. fuel pump &*

The foregoing is a correct description, of the *John Brown & Company, Limited.*

For David Rowan & Co Ltd
Arch^d W. Grierson,

Manufacturers

McInterson
Clydebank Secretary.

Dates of Survey while building
During progress of work in shops - *Jan 29th October 1923*
During erection on board vessel - *20 27th July 1925.*
Total No. of visits *197.*

Dates of Examination of principal parts—Cylinders *12.3.24 etc* Covers *12.3.24 etc* Pistons *9.6.24 etc* Rods *5.2.24 etc* Connecting rods *5.2.24 etc*
Crank shaft *30.3.25* Thrust shaft *30.3.25* Tunnel shafts *24.10.24* Screw shafts *23.4.24-25* Propellers *2.3.25* Stern tubes *18.2.25* Engine seatings *2.4.25*
Engines holding down bolts *16.4.25.* Completion of pumping arrangements *26.6.25* Engines tried under working conditions *27.7.25*
Completion of fitting sea connections *See* Stern tube *See* Screw shaft and propeller *See*

Material of crank shaft *S.* Identification Mark on Do. *S. 2936 2935* Material of thrust shaft *S.* Identification Mark on Do. *P.3125.S.3121.*

Material of tunnel shafts *I. Steel* Identification Marks on Do. *LLOYD'S N° 788 H.C.F. 24.10.24* Material of screw shafts *I. Steel* Identification Marks on Do. *LLOYD'S N° 8169 L.C.D. (S) 23.2.25 (P) 24.2.25*

Is the flash point of the oil to be used over 150° F. *Yes.*

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 materials and workmanship are good. The machinery has been constructed under special survey, satisfactorily fitted in the vessel. tried and found good. It is eligible in our opinion for Classification and the Record + LMC 7.25 2 auxy bls 7.25. 180 lbs

OIL ENGINES. 2SC. S.A. 12 cy. 26 3/4 - 47 1/4. 1495 N.H.P. 228 180 lbs. J. BROWN & CO. LTD. GLS.

The amount of Entry Fee ... £ *6* : - : When applied for.
Special ... £ *137* : *7:6* : *4/8* : *19 25*
Donkey Boiler Fee ... £ *22* : *1* : : When received.
Travelling Expenses (if any) £ : : : *268.13.9 on 25.6.25*
296.14.9 on 25.6.25

Committee's Minute *GLASGOW 4-AUG 1925*

Assigned *+ LMC 7.25*

Jas. Cairns & Co. Davis.
Engineer Surveyor to Lloyd's Register of Shipping.

CERTIFICATE WRITTEN
14.8.25