

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 460

24 AUG 1929

Date of writing Report May 6 29 When handed in at Local Office 19 29

Port of Cleveland, Ohio

No. in Survey held at Cleveland

Date, First Survey Oct 29 28 Last Survey Apr 10 1929

Screw ~~propellers~~ Motor vessel "Fleurdelis"

Number of Visits 29 Tons { Gross 315.99 Net 92.10

Master Built at Montreal P.Q. By whom built Canadian Vickers Sta. Yard No. 108 When built 1929.7

Engines made at Cleveland By whom made Winton Eng. Coy. Engine No. 3154 When made 1929

Donkey Boilers made at Annan By whom made Cochrane Boiler No. When made 1929

Brake Horse Power 1800 Total Owners Department of Marine & Fisheries Ottawa, Ont., Canada Port belonging to Ottawa

Nom. Horse Power as per Rule 345 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

OIL ENGINES, &c.—Type of Engines Winton Diesel Type 115A Port & Starb 2 or 4 stroke cycle 4 Single or double acting 2

Maximum pressure in cylinders 550 lbs No. of cylinders 6 x 3 = 18 No. of cranks 6 Diameter of cylinders 14"

Length of stroke 16" Revolutions per minute 450 Means of ignition Compressed air Kind of fuel used Diesel

Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 16 1/2"

Distance between centres of main bearings 22 1/2" Is a flywheel fitted Yes Diam 38" 2000 lbs. as per Rule 4.413"

Diameter of crank pins 8 Breadth of crank webs as per Rule 10.25" as fitted 10" Thickness of ditto as per Rule 4.32" as fitted 4.25"

Diameter of flywheel shaft as per Rule 4.413 as fitted 8" Diameter of tunnel shaft as per Rule 5" 5.42 as fitted 5 1/2" Diameter of thrust shaft as per Rule 5" 5.7 as fitted 5 3/4"

Diameter of screw shaft as per Rule 6" 5.99 as fitted 6 1/4" 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 Burned

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 Tight

If two liners are fitted, is the shaft lapped or protected between the liners Continuous If without liners, is the shaft arranged to run in oil Yes

Type of outer gland fitted to stern tube Yes Length of stern bush 2'-4" Diameter of propeller 5'-5 1/2" 57" diam

Pitch of propeller 57" No. of blades 3 state whether moveable No Total surface 7 1/2 square feet

Method of reversing Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 1"

Are the cylinders fitted with safety valves Yes Means of lubrication Pressure 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 Red to Tunnel

No. of cooling water pumps 1 210 Gals per min. 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 1 each eng. Diameter of ditto 5" Stroke 4 1/2"

Can one be overhauled while the other is at work Yes No. of auxiliary pumps connected to the main bilge lines One How driven Motor

Sizes of pumps 4" Suct. 3" disch. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 3" 2 1/2"

and in holds, etc. 3" No. of ballast pumps One How driven Motor Sizes of pumps 4" Suct. 3" disch.

Is the ballast pump fitted with a direct suction from the engine room bilges Yes State size 3" Is a separate auxiliary pump suction fitted in Engine Room and size No

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine Room always accessible Yes

Are the sluices on Engine Room bulkheads always accessible Yes Are all connections with the sea direct on the skin of the ship Yes

Are they valves or cocks Valves Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates Yes

Are the discharge pipes above or below the deep water line Above Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges Yes

Is the screw shaft tunnel watertight Yes Is it fitted with a watertight door Yes

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

No. of main air compressors one No. of stages 3 Diameters 2 1/16", 10 1/8", 1 1/2" Stroke 10 3/4" Driven by Main Engine

No. of auxiliary air compressors One No. of stages Diameters Stroke Driven by 12 H.P. Motor

No. of small auxiliary air compressors No. of stages Diameters Stroke Driven by

No. of scavenging air pumps Diameter Stroke Driven by

Diameter of auxiliary Diesel Engine crank shafts as per Rule 3.48" as fitted 3 3/8" 44 See report Are the air compressors and their coolers made so as to be easy of access Yes

AIR RECEIVERS:—No. of high pressure air receivers 4 1/2 Internal diameter 7 1/4" Cubic capacity of each 169 Cub. ft.

material Steel Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength 45.3 tons

thickness 3/8" working pressure by Rules 2160 lbs. No. of starting air receivers Two Internal diameter 21 1/4"

Total cubic capacity 46 Cub. ft. Material Steel Seamless, lap welded or riveted longitudinal joint Seamless

Range of tensile strength 36.4 tons min. thickness 1" Working pressure by rules 1840 lbs. 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 X What means are provided for cleaning their inner surfaces 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		550	80	ED	Tests applied
" " COVERS		550	80	"	only to water
" " JACKETS		15	80	"	jackets & fast
" " PISTON WATER PASSAGES		✓			witnessed by
MAIN COMPRESSORS—1st STAGE		50			the under-sign
" 2nd "		180			
" 3rd "		1345			The Air Rece
AIR RECEIVERS—STARTING		500			were not flame
" INJECTION		1000-1340			by the Society
AIR PIPES		-			Surveyors at
FUEL PIPES		-			manufacturers
FUEL PUMPS		-			works
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting
(If not, state date of approval)

Yes.

Receivers

Separate Tanks

SPARE GEAR

Furnished as required by the Rules.

The foregoing is a correct description.

The Vinton Engine Co. — J. D. P.

Manufacturer.

Dates of Survey while building
During progress of work in shops: 1929 Oct. 29, Nov. 15, Dec. 1, 19, 24, 29, Jan. 12, 18, 23, Feb. 26, 29, 11, 13, 14, 16, 18, 19, 25
During erection on board vessel: 1929 May 9, 10, 15, 16, 22, 30, 31, June 4, 14, 19, 21, 24, 25, July 5
Total No. of visits: 29, 14.

Dates of Examination of principal parts—Cylinders Jan. 4, Feb. 1, Mar. 4, Apr. 1, May 1, Jun. 1, Jul. 1, Aug. 1, Sep. 1, Oct. 1, Nov. 1, Dec. 1
Covers Jan. 4, Feb. 1, Mar. 4, Apr. 1, May 1, Jun. 1, Jul. 1, Aug. 1, Sep. 1, Oct. 1, Nov. 1, Dec. 1
Pistons Jan. 4, Feb. 1, Mar. 4, Apr. 1, May 1, Jun. 1, Jul. 1, Aug. 1, Sep. 1, Oct. 1, Nov. 1, Dec. 1
Rods Jan. 4, Feb. 1, Mar. 4, Apr. 1, May 1, Jun. 1, Jul. 1, Aug. 1, Sep. 1, Oct. 1, Nov. 1, Dec. 1
Connecting rods Jan. 4, Feb. 1, Mar. 4, Apr. 1, May 1, Jun. 1, Jul. 1, Aug. 1, Sep. 1, Oct. 1, Nov. 1, Dec. 1

Crane shaft 5.4.29 Thrust shaft 5.4.29 Tunnel shafts 9.4.29 Screw shaft 5.5.29 Propeller 5.5.29 Stern tube 11.4.29 Engine seatings 25.5.29

Engines holding down bolts 7.5.29 Completion of pumping arrangements 19.6.29 Engines tried under working conditions 19.6.29

Completion of fitting sea connections 30.5.29 Stern tube 15.5.29 Screw shaft and propeller 16.5.29

Material of crank shaft Steel Identification Mark on Do. 15.10.28 Material of thrust shaft ✓ Identification Mark on Do. 1844.45

Material of tunnel shafts Steel Identification Marks on Do. 1810.11.12.13.14 Material of screw shafts Steel Identification Marks on Do. 79.4.29

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 above engines have been

built under Special Survey & on completion were tested

under full load in the shop. The materials &

workmanship were found to be sound & efficient.

When the engines have been fitted on board the vessel

& tried out to the satisfaction of the Society's Surveyors

she will be eligible in my opinion for record & LMC

(with date) in the Register Book.

Attached hereto is copy of Crank shaft drawing, & certificates

of American Bureau of Shipping & Germanischer Lloyd's for air rece

also for ship certificates.

The amount of Entry Fee ... \$ 383.45 When applied for, Apr 14 1929

Special ... \$ 25.00 When received, 17.5.1929

Donkey Boiler Fee ... \$ 12.50

Travelling Expenses (if any) \$ 421.25

Committee's Minute

Assigned see minute on

Apr. RM 2073

FRI. 6 SEP 1929

TUE. 24 SEP 1929 TUE. 29 OCT 1929

Lloyd's Register Foundation