

Hull Report No. 33513
REPORT ON MACHINERY.

No. 74,311

Received at London Office

WED. APR. 27 1921

Date of writing Report 22nd April 1921 When handed in at Local Office 26 April 1921 Port of NEWCASTLE-ON-TYNE
No. in Survey held at South Shields Date, First Survey 29th Sept 1919 Last Survey 22nd April 1921
Reg. Book. on the Steel Screw Steamer "SAINT DOMINIQUE" (Number of Visits 46) Gross 29/22
Master Hull By whom built Livingston & Cooper (No. 193) Tons Net
Engines made at South Shields By whom made Geo. J. Grey & Co. (No. 601) when made 1921
Boilers made at Hellum By whom made Palmer & Co. Ltd. when made 1921
Registered Horse Power 234 Owners Frank Harold de C. Smith Port belonging to LONDON
Nom. Horse Power as per Section 28 234 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three
Dia. of Cylinders 20 1/2" - 33" - 54" Length of Stroke 39" Revs. per minute 80 Dia. of Screw shaft 11.53" Material of steel
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 water tight
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 Length of stern bush 4' 3"
Dia. of Tunnel shaft 10.32" Dia. of Crank shaft journals 10.83" Dia. of Crank pin 11" Size of Crank webs 15 1/2" x 7 1/4" Dia. of thrust shaft under
collars 11" Dia. of screw 14" 0" Pitch of Screw 14" 0" No. of Blades 4 State whether moveable No Total surface 68 sq. ft.
No. of Feed pumps Two Diameter of ditto 3 1/8" Stroke 20" Can one be overhauled while the other is at work Yes
No. of Bilge pumps Two Diameter of ditto 3 1/8" Stroke 20" Can one be overhauled while the other is at work Yes
No. of Donkey Engines Three Sizes of Pumps 1 1/2" x 5" x 6" + 2" x 10" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 30 1/2" AFT COFF 3 1/2" FWD COFF 2 1/2" ENG ROOM In Holds, &c. 20 3" No. 1, 20 3" No. 2, 20 3" No. 3
20 3" No. 4 with 10 3" HOLD WELL.

No. of Bilge Injections 1 sizes 1 1/2" dia Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 1 1/2"
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 Both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold 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 the Blow Off Cocks fitted with a spigot and brass covering plate Yes
What pipes are carried through the bunkers None How are they protected Yes
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings 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 Engine room gratings
OILERS, &c.—(Letter for record See separate report.) Manufacturers of Steel See separate report.

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
Long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Percentage of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
Thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules Steam dome: description of joint to shell % of strength of joint
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Connecting rod top and 2 Bottom end bolts and nuts. 2 main bearing bolts and nuts. 1 set of Coupling bolts and nuts. 1 set of piston bolts and nuts. 1 set of feed, bilge, air and circulating pump valves. 1 spare propeller. 1 set of piston rings for each cylinder. 2 safety valve springs, one top half of top end connecting rod brasses, one half bottom end bearing. 43 Condenser tubes, 15 boiler tubes. one set of main & donkey check valves. A quantity of assorted bolts & nuts of various sizes. Also spare for oil fuel installation, electric installation etc.

The foregoing is a correct description,

For Geo. T. Grey & Co

Manufacturer of main Engines

Dates of Survey while building { During progress of work in shops - - 1919 Sep 29, Oct 17, Nov 14, Dec 4, 30 1920 Jan 21, 26 Feb 26 Mar 16, Apr 15, 22, 28, May 4, 26, 31, Jun 2, 11 July 7, 13, 20 Aug 5, 18, 31 Sep 9, 16, 24, 30 Oct 6, 8 } During erection on board vessel - - - 15, 21 Nov 1, 4, 8, 12, 18, 23, 28, 29, Dec 15, 16 } Total No. of visits 46 23. 1921 Jan 4, 20, Mar 4, 23. (Hull) 1920. Sep 9 to Jun 29/22 Is the approved plan of main boiler forwarded herewith " " " donkey " " " "

Dates of Examination of principal parts—Cylinders 1-11-20 Slides 1-11-20 Covers 12-11-20 Pistons 1-11-20 Rods 1-11-20 Connecting rods 12-11-20 Crank shaft 13-12-20 Thrust shaft 13-12-20 Tunnel shafts 14/2/21 Screw shaft 4-10-19. Propeller 20-1-21 Stern tube 14-2-21 Steam pipes tested 21-4-21 Engine and boiler seatings 16/3/21 Engines holding down bolts 29/3/21 Completion of pumping arrangements 29/7/21 Boilers fixed 16/3/21 Engines tried under steam 29/7/21 Completion of fitting sea connections 25/2/21 Stern tube 25/2/21 Screw shaft and propeller 25/2/21 Main boiler safety valves adjusted 29/4/21 Thickness of adjusting washers 7 3/8" 5 7/8" PORT BOILERS 14 1/2" 5 1/2" Material of Crank shaft Steel Identification Mark on Do. 5030JRW Material of Thrust shaft Steel Identification Mark on Do. 5030JRW Material of Tunnel shafts Steel Identification Marks on Do. 5030JRW Material of Screw shafts Steel Identification Marks on Do. 5030JRW Material of Steam Pipes Copper. Test pressure 360 lb per sq inch 450 lb Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of Section 49 of the Rules been complied with Yes

Is this machinery duplicate of a previous case Yes

If so, state name of vessel S.S. "SAINT DIDIER"

General Remarks (State quality of workmanship, opinions as to class, &c. The engines of this vessel have been constructed under special survey and the workmanship and materials are sound and good.

On completion the engines were despatched to Hull for installing on board. When this has been done to the satisfaction of the Society's surveyors at Hull, and all the rule requirements fulfilled, the vessel will in my opinion, be eligible to have the record of L.M.C. with date, inserted in the Register Book.

The engines & boilers have been satisfactorily fitted on board the vessel. On completion they were examined while running full power trials in the Dumb. The machinery throughout is now in good & efficient condition & eligible in my opinion to have the record L.M.C. 6-22 marked in Red in the Society's Register Book. Also fitted for oil fuel F.P above 150°F. The requirements of section 49 of the Rules has been fully complied with. (See letter attached regarding reversing engine) Subject to reversing engine being again tried under steam.

The amount of Entry Fee ... £ 3 : 0 : 0 Special ... £ 58 : 10 : 0 Donkey Boiler Fee ... £ : : : Travelling Expenses (if any) £ : : :

When applied 26 April 21 -> 46-16-07 Hull L 11.14/16 49/16/0 Son 27.5 1921 MR

Wm Lindale. Harbottle. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned

Deferred THE JUL 18 1922 FRI DEC 28 1923 FRI JUL 13 1923

TUES. 9 SEP 1924