

REPORT ON MACHINERY.

No. 3363

RECEIVED NEW YORK Sept 2 1919
Date of writing Report July 31 1919 When handed in at Local Office Aug 4 1919 Port of Philadelphia
No. in Survey held at Trenton & Chester Date, First Survey Oct 23 1918 Last Survey July 12 1919
Reg. Book. on the Twin Screw Steel Steamer "Edelwyn" (Number of Visits 52)
Master Ralph Gibson Built at Chester, Pa By whom built Sun Ship Bldg Co When built 1919
Engines made at Trenton By whom made De Canal Steam Turbine Co (28287-8) when made 1919
Boilers made at Charleston, W. Va By whom made The Charles Ward Engineering Co when made 1918
Registered Horse Power Owners United States Shipping Board Port belonging to Washington
Shaft Horse Power at Full Power 5500 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines De Canal Single Reduction Turbine No. of Turbines 4
Diameter of Rotor Shaft Journals, H.P. 6" L.P. 6" Diameter of Pinion Shaft 5"
Diameter of Journals 5" Distance between Centres of Bearings 27 3/8" Diameter of Pitch Circle 5.4"
Diameter of Wheel Shaft 13 5/8" Distance between Centres of Bearings 60" Diameter of Pitch Circle of Wheel 119.8"
Width of Face 2 @ 29" Diameter of Thrust Shaft under Collars 13.25" Diameter of Tunnel Shaft as per rule 11.94 12.05
No. of Screw Shafts 2 Diameter of same as per rule 12.89 12.98 CL as fitted 13.625 Diameter of Propeller 15'-0" Pitch of Propeller 14'-6"
No. of Blades 3 State whether Moveable No Total Surface 62.7 sq ft Diameter of Rotor Drum, H.P. L.P. Astern
Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 2440 Propeller 110

PARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	1.660	32.551	2	1.180	48.903	1	1.660	39.134	2
2ND 10 1/2"	1.787	32.364	5	1.772	50.081	1	1.953	41.674	2
3RD 7"	1.181	33.148	1	2.166	50.873	1	2.695	42.668	1
4TH 8"	1.181	33.148	1	2.756	52.051	1			
5TH 9"	1.181	33.148	1	3.150	51.573	1			
6TH 10 1/2 12"	1.457	33.708	3	4.015	53.313	1			
7TH 13"	1.772	34.328	1	4.724	54.033	1			
8TH "				6.300	55.733	1			

No. and size of Feed pumps 2 - 15" x 11" x 27"
No. and size of Bilge pumps 1 - 10" x 8 1/2" x 10" 1 - 7 1/2" x 5" x 6" 1 - 7 1/2" x 8 1/2" x 6"
No. and size of Bilge suction in Engine Room & Boiler room 4 - 3 1/2" & 2 - 2 1/2" in turbine recess.
In Holds, etc. No 1-2-3-4-5-6-7-8 - 2 - 3 1/2"

No. 8 hold 1 - 3 1/2" Tunnel wells 2 - 3 1/2"
No. of Bilge Injections 2 sizes 10" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine Room & size Yes 5"
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Co ks 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 Suction to forward bilges How are they protected Heavy wooden casings
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 platform.
Is the shaft fitted with continuous line Yes

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel

Total Heating Surface of Boilers 3612 Is Forced Draft fitted Yes No. and Description of Boilers 4 Watertube Boilers
Working Pressure 300 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 a rising 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
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
plates
Size of compensating ring No. and Description of Furnaces in each Boiler Material Outside diameter
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom
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 Diameter 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
Diameter 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 stay 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 Diameter of rivet holes Pitch of rivets
Working pressure of shell by rules Crown plates: Thickness How stayed

002289-002297-0134

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 _____

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— 14 turbine bearings 2 turbine thrust bearings 4 outside pinion bearings 2 middle pinion bearings 2 gear bearings 5 turbine buckets for each pipe 20 coupling bolts and bronze bushings 1 set carbon packing for HP & LP turbines 5 bolts & nuts for gear case 2 studs & nuts for HP & LP turbine bearing pinion & gear bearings 5 bolts & nuts for turbine case 1 spare pinion 26 plain boiler tubes 1 propeller shaft 1 propeller 2 valves & seats for general service, deck, FW & SW pumps 2 safety valve springs 1 spare spring for all relief valves 1 set coupling bolts & nuts 10 condense tubes 100 fenders 3 check valves valves & seats for feed pump, high pump, lubricating oil pump 1 lubricating oil pump, iron of various sizes, a quantity of assorted bolts & nuts.

The foregoing is a correct description,

Dexter Steam Turbine Co.
St. Paul, Minn.

Manufacturer.

Robert H. Hing

1918 1919
Dates of Survey while building { During progress of work in shops - - { June 20 July 22 Aug 15 Sept 26 Oct 4. 10. 24 Nov 1 Dec 3 Jan 2. 10. 22 Feb 25 Mar 20 April 7. 28 May 13. 22.
During erection on board vessel - - - { 6. 5. 23. 30. Nov 6. 19. 26. Dec 5. 10. 13. 17. 19. 31. Jan 4. 9. 13. 23. Feb 5. 11. 14. Mar 7. 14. April 4. 7. 11. 18. 28. May 2. 22. 26. June 5. 12.
Total No. of visits 52 Is the approved plan of main boiler forwarded herewith No

Dates of Examination of principal parts—Casings 10. 10. 18 Rotor 20. 3. 19 Blading 22. 1. 19 Gearing 13. 5. 19
Rotor shaft 1. 11. 18 Thrust shaft 13. 1. 19 Tunnel shafts 13. 1. 19 Screw shaft 13. 12. 18 Propeller 19. 12. 18
Stern tube 5. 12. 18 Steam pipes tested 7. 7. 19 Engine and boiler seatings 14. 3. 19 Engines holding down bolts 7. 7. 19
Completion of pumping arrangements 9. 7. 19 Boilers fired 12. 6. 19 Engines tried under steam 12. 7. 19
Main boiler safety valves adjusted 9. 7. 19 Thickness of adjusting washers Locknuts.

Material and tensile strength of Rotor shaft Steel: 78,400 lbs Identification Mark on Do. A. T. T.
Material and tensile strength of Pinion shaft Chrome-Nickel Steel 112,000 lbs Identification Mark on Do. A. T. T.
Material of Wheel shaft Steel Identification Mark on Do. A. T. T. Material of Thrust shaft Steel Identification Mark on Do. 443 WC
Material of Tunnel shafts Steel Identification Marks on Do. 2885 WJS Material of Screw shafts Steel Identification Marks on Do. 3425 JD
Material of Steam Pipes Seamless steel Test pressure 900 lbs

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 a duplicate of a previous case Yes If so, state name of vessel "Sol Navis"

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

The machinery of this vessel has been securely fitted on board, tried under steam, and found satisfactory. It is submitted that the vessel be eligible for record of +LMC 7-19 fitted for fuel oil 7-19, flash point above 150°F. in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. +LMC. 7. 19. F.D.

4 Steam Turbines geared to 2 Screw Shafts
4 Watertube Boilers Fitted for oil fuel 7-19 F. Above 150°F.
Subject to Watertube Boilers being surveyed under the a

The amount of Entry Fee ... £\$ 15:00
Special ... £\$ 342:75
Donkey Boiler Fee ... £ 104:20
Travelling Expenses (if any) £ 13:00
10 00

When applied for,

30 July 1919

When received,

10/9/19

A. T. Thomas Wm Rumham
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ LMC. 7. 19 subject

10/10/19



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Foundation