

REC'D NEW YORK Sept. 12 1919

# REPORT ON MACHINERY No. 58

RECEIVED AT LONDON OFFICE

REC'D NEW YORK Sept. 13 1919 Port of Pittsburgh, Pa

Survey held at Ford City, Pa Date, First Survey \_\_\_\_\_ Last Survey 19  
 on the New Steel S.S. War Company of Coughlan & Sons No. 10  
Double Reduction Gear, made by Faber & Schlegel Co. Ford City Pa  
 Built at Vancouver B.C. By whom built John Coughlan & Sons When built 1918  
 Engines made at Spokane Wash. By whom made The Hallidie Co. when made 1918  
 Silers made at Vancouver B.C. By whom made Vulcan Iron Works, when made 1919  
 Registered Horse Power 577 Owners Imperial Munition Board Port belonging to London  
 Shaft Horse Power at Full Power 2500 Is Refrigerating Machinery fitted for cargo purposes NO Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines Double Reduction Grand turbines No. of Turbines 2  
 Diameter of Rotor Shaft Journals, H.P. \_\_\_\_\_ L.P. \_\_\_\_\_ Diameter of Pinion Shaft 1st Red. 4 7/8 2nd Red. 10"  
 Diameter of Journals 1st Red. 5 7/8 2nd Red. 10" Distance between Centres of Bearings 1st Red. 2'-6" 2nd Red. 7'-7 1/2" (31 teeth)  
 Diameter of Wheel Shaft 13 1/2" Distance between Centres of Bearings 5'-1 1/2" Diameter of Pitch Circle of Wheels 1st Red. 13'-20" (33 teeth) 2nd Red. 16'-00" (184 teeth)  
 Diameter of Face 1st Red. 15" 2nd Red. 28" Diameter of Thrust 21" Kingsbury Thrust at forward end of shaft under collars Diameter of Tunnel Shaft Large shaft  
 Diameter of Screw Shafts \_\_\_\_\_ Diameter of same \_\_\_\_\_ Diameter of Propeller \_\_\_\_\_ Pitch of Propeller \_\_\_\_\_  
 State whether Moveable \_\_\_\_\_ Total Surface \_\_\_\_\_ Diameter of Rotor Drum, H.P. \_\_\_\_\_ L.P. \_\_\_\_\_ Astern \_\_\_\_\_  
 Revs. per Minute at Full Power, Turbine 3200 Propeller 90

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.
EXPANSION .....									
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and size of Feed pumps \_\_\_\_\_  
 and size of Bilge pumps \_\_\_\_\_  
 and size of Bilge suction in Engine Room \_\_\_\_\_  
 In Holds, &c. \_\_\_\_\_  
 of Bilge Injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate Donkey Suction fitted in Engine Room & size \_\_\_\_\_  
 all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_  
 all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the Discharge Pipes above or below the deep water line \_\_\_\_\_  
 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 \_\_\_\_\_  
 at pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_  
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_  
 the Screw Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

MANUFACTURERS, &c.—(Letter for record \_\_\_\_\_) Manufacturers of Steel \_\_\_\_\_  
 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 \_\_\_\_\_  
 in each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler \_\_\_\_\_ No. and Description of Safety Valves to \_\_\_\_\_  
 Area of each valve \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_  
 Mean dia. of boilers \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_  
 Range of tensile strength \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ Descrip. of riveting: cir. seams \_\_\_\_\_  
 Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell \_\_\_\_\_  
 No. and Description of Furnaces in each Boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_  
 Thickness of plates \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_  
 Working pressure by rules \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
 Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space \_\_\_\_\_  
 Material of stays \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_ How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_  
 Material of Front plates at bottom \_\_\_\_\_  
 Working pressure of plate by rules \_\_\_\_\_  
 Material of tube plates \_\_\_\_\_ Thickness: Front \_\_\_\_\_ Back \_\_\_\_\_ Mean pitch of stays \_\_\_\_\_  
 Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and \_\_\_\_\_  
 Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_  
 Description of longitudinal joint \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
 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 \_\_\_\_\_

IS A DONKEY BOILER FITTED? \_\_\_\_\_ If so, is a report now forwarded? \_\_\_\_\_

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,  
**FAWCOS ENGINE CO.**  
*H. B. Hubble* Works Manager  
 Manufacturer.

Dates of Survey while building  
 During progress of work in shops - - - 1918 Nov. 23, Dec. 4, 9, 23, 24, 27, 30. 1919 Jan 7, 15 } 8 visits at Ford City Pa.  
 During erection on board vessel - - -  
 Total No. of visits \_\_\_\_\_

Dates of Examination of principal parts—Casings \_\_\_\_\_ Rotors \_\_\_\_\_ Blading \_\_\_\_\_ Gearing \_\_\_\_\_  
 Rotor shaft \_\_\_\_\_ Thrust shaft \_\_\_\_\_ Tunnel shafts \_\_\_\_\_ Screw shaft \_\_\_\_\_ Propeller \_\_\_\_\_  
 Stern tube \_\_\_\_\_ Steam pipes tested \_\_\_\_\_ Engine and boiler seatings \_\_\_\_\_ Engines holding down bolts \_\_\_\_\_  
 Completion of pumping arrangements \_\_\_\_\_ Boilers fixed \_\_\_\_\_ Engines tried under steam \_\_\_\_\_  
 Main boiler safety valves adjusted \_\_\_\_\_ Thickness of adjusting washers \_\_\_\_\_

Material and tensile strength of Rotor shaft *1 1/2" R. Chrome Nickel Steel 2" R. O.N. Forge Steel*  
 Material and tensile strength of Pinton shaft *1 1/2" R. Chrome Nickel Steel 119,000 lbs*  
 Material of Wheel shaft *Engel Steel* Identification Mark on Do. *N. 18 T.N.* Material of Thrust shaft *Hingelberg* Identification Mark on Do. \_\_\_\_\_  
 Material of Tunnel shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_  
 Material of Steam Pipes \_\_\_\_\_ Test pressure \_\_\_\_\_

Is an installation fitted for burning oil fuel \_\_\_\_\_ Is the flash point of the oil to be used over 150°F. \_\_\_\_\_  
 Have the requirements of Section 49 of the Rules been complied with \_\_\_\_\_  
 Is this machinery a duplicate of a previous case \_\_\_\_\_ If so, state name of vessel \_\_\_\_\_

General Remarks (State quality of workmanship, opinions as to class, &c.) *This Reduction Gear has been built under special survey. The materials & workmanship are of good quality. The shop running trials proved satisfactory. The gear has been shipped to Vancouver B.C. The Survey there have been notified.*

Credit 1/6 Fee to Pittsburgh Pa			
The amount of Entry Fee	£	:	When applied for,
Special	£	:	19
Donkey Boiler Fee	£	:	When received,
Travelling Expenses (if any)	\$ 8 : 00	:	19

*J. Hodge*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 14 OCT. 1919  
 Assigned \_\_\_\_\_

Rpt. 13. REC'D REPORT

Port of *Vancouver*  
 No. in Reg. Book \_\_\_\_\_ on the *Iron* of \_\_\_\_\_  
 Built at \_\_\_\_\_  
 Owners *Imperial*  
 Yard No. *10* E.L.

DESCRIPTION OF DYNAMO  
*Two of 12 H.P. Compound*  
 Capacity of Dynamo \_\_\_\_\_  
 Where is Dynamo fixed \_\_\_\_\_  
 Position of Main Switch \_\_\_\_\_  
 Positions of auxiliary switches \_\_\_\_\_  
 Quarters of *Sea* \_\_\_\_\_  
 Officers *Gen* \_\_\_\_\_  
 If fuses are fitted on main circuits *Yes*

If vessel is wired on the \_\_\_\_\_  
 Are the fuses of non-oxidizing \_\_\_\_\_  
 Are all fuses fitted in earthenware \_\_\_\_\_  
 Are all switches and fuses permanent instruments \_\_\_\_\_  
 Total number of lights provided \_\_\_\_\_  
 A *60*  
 B *15*  
 C *14*  
 D *Welder Motor*  
 E *51*  
 2 Mast head light  
 2 Side light  
 5 \_\_\_\_\_  
 If arc lights, what protection \_\_\_\_\_

Where are the switches carried \_\_\_\_\_  
 DESCRIPTION OF CABLES  
 Main cable carrying *7*  
 Branch cables carrying *4*  
 Branch cables carrying *3*  
 Leads to lamps carrying *1*  
 Cargo light cables carrying *1*

DESCRIPTION OF INSULATION  
*All Cables Watertight Covered.*  
 Joints in cables, how made, *Oil Rubber Tape an insulator*  
 Are all the joints of cables in safe positions, none being \_\_\_\_\_  
 Are there any joints in or \_\_\_\_\_  
 How are the cables led through \_\_\_\_\_