

Rpt. 4.

REPORT ON MACHINERY.

No. 933
TUE APR 6 1920

Date of writing Report *Feb 26* 19 *20* When handed in at Local Office *Feb 26* 19 *20* Port of *Seattle Wash USA*
No. in Survey held at *Seattle* Date, First Survey *Nov 1st 1919* Last Survey *February 7th 1920*
Reg. Book. *First Entry on the Steel Screw Steamer "ROBIN GOODFELLOW" Builders N. D-76* (Number of Visits *21*)
Master *J. S. Lapraik* Built at *Seattle* By whom built *Skinner & Eddy Corp.* Tons Gross *6860.5* Net *5122*
Engines made at *Eric Pa.* By whom made *General Electric Company* when made *1920*
Boilers made at *Seattle* By whom made *Commercial Boiler Works* when made *1920*
Registered Horse Power *Owners Robin Line Steamship Co (Skinner Mfg)* Port belonging to *San Francisco*
Nom. Horse Power as per Section 28 *637.20* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *yes*

INES, &c.—Description of Engines *Curtis Turbine with double reduction gear* No. of Cylinders *2* No. of Cranks *2*
Length of Stroke *13.27* Revs. per minute *90* Dia. of Screw shaft *14.47* Material of *Steel*
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
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
in the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *yes* If two
are fitted, is the shaft lapped or protected between the liners *yes* Length of stern bush *61"*
Tunnel shaft *as per rule 13.27* Dia. of Crank shaft journals *as per rule 13.27* Dia. of Crank pin *14.47* Size of Crank webs *15* Dia. of thrust shaft under
14.47 Dia. of screw *17.0* Pitch of Screw *14.3* No. of Blades *4* State whether moveable *yes* Total surface *89.6 sq ft*
Feed pumps *2* Diameter of ditto *9"* Stroke *24"* Can one be overhauled while the other is at work *yes*
Bilge pumps *3 Duplex* Diameter of ditto *6.5 x 6* Stroke *12 x 12* Can one be overhauled while the other is at work *yes*
Donkey Engines *As Above* Sizes of Pumps *As Above* No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room *5-3.2* Fire Room *4-3.2* In Holds, &c. *10-3.2 Deep Tank 4-4.5 Shaft Tunnel 1-3.2*
Bilge Injections *1* sizes *10"* Connected to *condensate* circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *yes 3.2*
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 *None*
connections with the sea direct on the skin of the ship *yes* Are they Valves or Cocks *Valves*
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 *Below*
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*
pipes are carried through the bunkers *Tank Air Pipes* How are they protected *Wood Casings*
Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *yes*
Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *yes*
Screw Shaft Tunnel watertight *yes* Is it fitted with a watertight door *yes* worked from *Engine Room Casings at upper deck*

ERS, &c.—(Letter for record *Aug 12-1919* Manufacturers of Steel *Illinois Steel Co and Carnegie Steel Co* S.S.B.)
Heating Surface of Boilers *8346* Is Forced Draft fitted *yes* No. and Description of Boilers *3 Single End Scotch Marine*
Working Pressure *210* Tested by hydraulic pressure to *315* Date of test *Dec 5-1919* No. of Certificate *✓*
Can boiler be worked separately *yes* Area of fire grate in each boiler *63 sq ft* No. and Description of Safety Valves to
Boiler *2-3.2 dia. Spring loaded* Area of each valve *9.6* Pressure to which they are adjusted *210* Are they fitted with easing gear *yes*
distance between boilers or uptakes and bunkers or *woodwork* *Boilers 3.9"* Mean dia. of boilers *14.9"* Length *11.9"* Material of shell plates *Steel*
Range of tensile strength *60,000 lbs per sq in* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *Double Lap*
Triple Butt Diameter of rivet holes in long. seams *1.76* Pitch of rivets *10.4* Lap of plates or width of butt straps *22.3*
ages of strength of longitudinal joint rivets *84.5* Working pressure of shell by rules *229* Size of manhole in shell *Upper Back Head 12" x 16"*
Compensating ring *Flanged* No. and Description of Furnaces in each boiler *3. Harrison* Material *Steel* Outside diameter *48.16*
of plain part *top* Thickness of plates *bottom 2.02* Description of longitudinal joint *Welded* No. of strengthening rings *✓*
pressure of furnace by the rules *222* Combustion chamber plates: Material *Steel* Thickness: Sides *11/16* Back *4/16* Top *4/16* Bottom *15/16*
stays to ditto: Sides *7 x 7 3/4* Back *7 1/2 x 7 3/4* Top *7 x 7 3/4* If stays are fitted with nuts or riveted heads *Others Riveted* Working pressure by rules *Back 214*
of stays *Iron* Area at smallest part *2.07* Area supported by each stay *66.5* Working pressure by rules *226* End plates in steam space:
Steel Thickness *1.76* Pitch of stays *18 x 18 1/2* How are stays secured *Double Nuts* Working pressure by rules *210* Material of stays *Steel*
smallest part *8.29* Area supported by each stay *333* Working pressure by rules *258* Material of Front plates at bottom *Steel*
Material of Lower back plate *Steel* Thickness *1 1/2* Greatest pitch of stays *7 3/4 x 12 1/2* Working pressure of plate by rules *300*
of tubes *2 3/4* Pitch of tubes *3 3/4 x 3 3/4* Material of tube plates *Steel* Thickness: Front *13/16* Back *13/16* Mean pitch of stays *9.56*
cross wide water spaces *13 1/2* Working pressures by rules *248* Girders to Chamber tops: Material *Steel* Depth and
of girder at centre *11 1/2 x 13 1/2* Length as per rule *34* Distance apart *9 1/2* Number and pitch of stays in each *4-7"*
pressure by rules *234* Steam dome: description of joint to shell *None* % of strength of joint *✓*
Thickness of shell plates *Material* Description of longitudinal joint *Diam. of rivet holes*
rivets *Working pressure of shell by rules* Crown plates *Thickness* How stayed *✓*
SUPERHEATER. Type *Loco Superheater* Date of Approval of Plan *Sept. 19-1919* Tested by Hydraulic Pressure to *630 lbs*
Date of Test *January 27-1920* Is a Safety Valve fitted to each Section of the Superheater *which can be shut off from the boiler* *yes*
Diameter of Safety Valve *1 1/2"* Pressure to which each is adjusted *210* Is Easing Gear fitted *yes*

IS A DONKEY BOILER FITTED? No

SPARE GEAR. State the articles supplied:—

TURBINE - GEARS

- 1 Complete set of turbine and gear bearings
- 1 Complete set of packing rings for turbine heads & diaphragms
- 1 High speed pinion with half coupling
- 1 Set turbine thrust collars
- 1 Emergency governor complete
- 1 Set pins and bushings for each size of slip coupling
- 1 Set bolts and nuts for rotor bearings
- 1 Set bolts and nuts for gear wheel and pinion bearings
- 1 Set bolts and nuts for turbine and gear case joints
- 6 Thermometers. 25 Condenser tubes and 50 ferrules

PROPELLER & SHAFTS

- 1 Propeller shaft complete.
- 2 Propeller blades

The foregoing is a correct description,

Skinner & Eddy Corporation
by E. N. McCallum, Ch. Engr.

Manufacturer.

Dates of Survey while building		1919	1920	(12)
		Nov 1-6-10-17-20-29	Dec 5-12-20-26-29	
During progress of work in shops --		1920		
		Jan. 12-16-22-27-31	Feb. 4-5-6-7	(9)
During erection on board vessel --				
Total No. of visits		21		

Is the approved plan of main boiler forwarded herewith

" " " donkey " "

Dates of Examination of principal parts—		Cylinders	Slides	Covers	Pistons	Rods
Connecting rods		Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
Stern tube	Nov. 1-10	Steam pipes tested	Jan. 27	Feb. 4	Engine and boiler seatings	Dec. 26-29
Engines holding down bolts	Feb. 4-					
Completion of pumping arrangements	Feb. 6	Boilers fixed	Jan. 12	Engines tried under steam	Feb. 6	
Completion of fitting sea connections	Dec. 29	Stern tube	Dec. 29-30	Screw shaft and propeller	Dec. 29	Jan.
Main boiler safety valves adjusted	Feb. 5	Thickness of adjusting washers	P. 742-705. C. 786-427. S. 538-			
Material of Crank shaft	Steel	Identification Mark on Do.	Material of Thrust shaft	Steel	Identification Mark on Do.	
Material of Tunnel shafts	Steel	Identification Marks on Do.	Material of Screw shafts	Steel	Identification Marks on Do.	
Material of Steam Pipes	Steel	Test pressure	630 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	"ROBIN HOOD" - "ROBIN ADRIAN" - "ROBIN GRAY"			

General Remarks (State quality of workmanship, opinions as to class, &c. The Turbine and reduction gears made

by the General Electric Co. Erie Pa. specially surveyed during construction by a Surveyor to the Society, installed on board the vessel with all shafting, auxiliaries, pipes, fittings and connections under special survey and in accordance with the approved plans.

The Boilers built by the Commercial Boiler Works, Seattle, under special survey and installed on board with all mountings, fittings and connections in accordance with the approved plans. The material tested as required by the Society's rules and together with workmanship found of good quality, tested by hydraulic pressure and found sound and satisfactory. The machinery seen tested under working conditions and found satisfactory. The material is eligible, in my opinion, to have the record of LMC 2.20 made in the Register Book in the case of this vessel and fitted for oil fuel 2.20 F.P. above 150° F.

Buffalo N.Y. Report No. 74 forwarded herewith, Turbine Case No. 21825. Iron Case No. 21826.

It is submitted that this vessel is eligible for IGEARED STEAM TURBINE.

THE RECORD + L.M.C. 2.20. F.D. FITTED FOR OIL FUEL 2.20 F.P. ABOVE 150° F. 1919/4/20.

The amount of Entry Fee ...	\$ 15 : 00 :	When applied for,	
Credit Buffalo ...	86 : 43 :	Feb. 26, 1920	
Self Special Seattle ...	172 : 87 :		
Donkey Boiler Fee ...	£ : :	When received,	
Travelling Expenses (if any) ...	\$ 59 : 60 :	1919/4/20	1919/4/20

James Fowler
Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute New York MAR - 9 1920

Assigned

+ LMC 2.20 Subject

MACHINERY DEPT.
MAY 1920
6.4.20