

# REPORT ON MACHINERY

No. 13381

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Date of writing Report Dec. 13<sup>th</sup> 1916 When handed in at Local Office Dec. 13<sup>th</sup> 1916 Port of New York  
 No. in Survey held at Shenectady Date, First Survey July 5 Last Survey Oct 9<sup>th</sup> 1916  
 Reg. Book. S.P. Nels Nielsen (Number of Visits 5)  
 on the S.P. Nels Nielsen

Master \_\_\_\_\_ Built at Seattle By whom built Skinner & Eddy Corporation When built 1916  
 Engines made at Shenectady By whom made The General Electric Company when made 1916  
 Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Shaft Horse Power at Full Power 2500 Is Refrigerating Machinery fitted for cargo purposes \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

**TURBINE ENGINES, &c.**—Description of Engines Geared Turbine No. of Turbines One  
 Diameter of Rotor Shaft Journals, H.P. 8 L.P. ✓ Diameter of Pinion Shaft 3 1/2  
 Diameter of Journals 6 1/4 Distance between Centres of Bearings 32 1/2 Diameter of Pitch Circle HS PN. 7.167 "GEAR 2' 8"  
 Diameter of Wheel Shaft 1 1/4 Distance between Centres of Bearings 48 1/4 Diameter of Pitch Circle of Wheel HS PN. 10.167 "GEAR 6' 6.7"  
 Width of Face 14.35 Diameter of Thrust Shaft under Collars ✓ Diameter of Tunnel Shaft as per rule \_\_\_\_\_ as fitted \_\_\_\_\_  
 No. of Screw Shafts ✓ Diameter of same as per rule \_\_\_\_\_ as fitted \_\_\_\_\_ Diameter of Propeller ✓ Pitch of Propeller ✓  
 No. of Blades ✓ State whether Moveable ✓ Total Surface \_\_\_\_\_ 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 3505 Propeller 100

## ARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	ACTIVE HEIGHT OF BLADES.	PITCH DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	ACTIVE HEIGHT OF BLADES.	PITCH DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	8.75"	2' 11 1/2"	2				8.85"	3' 3"	2
2ND	6.25"	3' 9"	1				3.375"	3' 3"	1
3RD	1.25"	3' 10 1/2"	1						
4TH	2.5"	4' 0"	1						
5TH	6"	4' 2"	1						
6TH									
7TH									
8TH									

No. and size of Feed pumps \_\_\_\_\_  
 No. and size of Bilge pumps \_\_\_\_\_  
 No. and size of Bilge suction in Engine Room \_\_\_\_\_  
 In Holds, &c. \_\_\_\_\_

No. of Bilge Injections \_\_\_\_\_ sizes \_\_\_\_\_ Connected to condenser, or to circulating pump \_\_\_\_\_ Is a separate Donkey Suction fitted in Engine Room & size \_\_\_\_\_  
 Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses in Engine room always accessible \_\_\_\_\_  
 Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 Are 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 \_\_\_\_\_  
 Are 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 \_\_\_\_\_  
 What pipes are carried through the bunkers \_\_\_\_\_ How are they protected \_\_\_\_\_  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times \_\_\_\_\_  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges \_\_\_\_\_  
 Is the Screw Shaft Tunnel watertight \_\_\_\_\_ Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—(Letter for record \_\_\_\_\_) Manufacturers of Steel

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 \_\_\_\_\_  
 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 \_\_\_\_\_  
 top \_\_\_\_\_ crown \_\_\_\_\_  
 Length of plain part \_\_\_\_\_ Thickness of plates \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 bottom \_\_\_\_\_ 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 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 \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
 Working pressure of shell by rules \_\_\_\_\_ Crown plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_



Diameter of Safety Valve \_\_\_\_\_ Pressure to which each is adjusted \_\_\_\_\_ Is Easing Gear fitted \_\_\_\_\_

*If so, is a report now forwarded?*

Manufacturer.

Dates of Survey while building	{ During progress of work in shops - - }	July 11. 25 Aug 17. 21. Oct. 9 <sup>th</sup> .
	{ During erection on board vessel - - }	
	Total No. of visits	5.

*Is the approved plan of main boiler forwarded herewith*

*Wm. Salma for self and A. O. H.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Assigned: See other report

Lloyd's Register  
Foundation