

# REPORT ON MACHINERY.

747

(Received at London Office) MONDAY 12 JAN 1885

No. in Survey held at Hamburg Date, first Survey 15 Dec. 84 East Survey 9<sup>th</sup> Jan 1885  
 Book. S. S. Wilhelm (Number of Visits           )  
 on the S. S. Wilhelm Tons 146, 61.  
 Master H. J. Nilsson Built at Ljoberg When built 1884.  
 Engines made at Ljoberg By whom made G. F. Cavallin when made 1884  
 Boilers made at Ljoberg By whom made G. F. Cavallin when made 1884  
 Horse Power 25 Owners G. F. Cavallin Port belonging to Sundswall

## ENGINES, &c.—

Description of Engines Direct acting compound inverted  
 Diameter of Cylinders 11<sup>th</sup> and 19<sup>th</sup> Length of Stroke 18<sup>th</sup> No. of Rev. per minute 84 Point of Cut off, High Pressure 1/2 Low Pressure 1/2  
 Diameter of Screw shaft 4<sup>th</sup> Diameter of Tunnel shaft 4<sup>th</sup> Diameter of Crank shaft journals 4<sup>th</sup> Diameter of Crank pin 4<sup>th</sup> size of Crank webs             
 Diameter of screw            Pitch of screw            No. of blades 4 state whether moveable no total surface             
 Diameter of Feed pumps 1 diameter of ditto 2 1/8<sup>th</sup> Stroke 9<sup>th</sup> Can one be overhauled while the other is at work             
 Diameter of Bilge pumps 1 diameter of ditto 2 1/8<sup>th</sup> Stroke 9<sup>th</sup> Can one be overhauled while the other is at work             
 Where do they pump from Bilge of Engine and hold  
 Diameter of Donkey Engines 1 Size of Pumps 2 1/4<sup>th</sup> & 9<sup>th</sup> Where do they pump from Sea and Bilge  
on deck overboard and to Boiler  
 Are all the bilge suction pipes fitted with roses no Are the roses always accessible            Are the sluices on Engine room bulkheads always accessible             
 Are there bilge injections            and sizes            Are they connected to condenser, or to circulating pump             
 How are the pumps worked by lever  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Cocks  
 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 below  
 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 no  
 How are pipes carried through the bunkers none How are they protected             
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock December 1884  
 Is the screw shaft tunnel watertight            and fitted with a sluice door            worked from           

## BOILERS, &c.—

Number of Boilers 1 Description circular multitubular  
 Working Pressure 70 Tested by hydraulic pressure to 160 Date of test Sept 1884.  
 Description of superheating apparatus or steam chest none  
 Can each boiler be worked separately            Can the superheater be shut off and the boiler worked separately             
 Area of square feet of fire grate surface in each boiler 15 Description of safety valves 1 1/8<sup>th</sup> & springs valves  
 Area to each boiler 2 area of each valve 4 inches Are they fitted with easing gear 1  
 Area of safety valves to superheater            area of each valve            are they fitted with easing gear             
 Smallest distance between boilers and bunkers or woodwork 12 inches  
 Diameter of boilers 6 feet 7 inches Length of boilers 8 feet description of riveting of shell long. seams chain riveting circum. seams chain riveting  
 Thickness of shell plates 7/16<sup>th</sup> diameter of rivet holes 3/4<sup>th</sup> whether punched or drilled drilled pitch of rivets 2 1/2 inches  
 Thickness of plating 4 inches percentage of strength of longitudinal joint 72 working pressure of shell by rules 68  
 Area of manholes in shell 15 x 12<sup>th</sup> size of compensating rings 1 1/4 x 5/8 and 2<sup>th</sup> x 3/4<sup>th</sup>  
 Diameter of Furnaces in each boiler 1 outside diameter 3 feet length, top 6<sup>th</sup> 3<sup>th</sup> bottom 6<sup>th</sup> 3<sup>th</sup>  
 Thickness of plates 7/16 description of joint single riveting if rings are fitted no greatest length between rings             
 Working pressure of furnace by the rules 75  
 Thickness of combustion chamber plating, thickness, sides 7/16 back 7/16 top 7/16  
 Thickness of stays to ditto, sides 8<sup>th</sup> back 6<sup>th</sup> top 9<sup>th</sup>  
 Are stays fitted with nuts or riveted heads nuts working pressure of plating by rules 75  
 Diameter of stays at smallest part 1<sup>th</sup> working pressure of ditto by rules 45 2/3  
 Thickness of plates in steam space, thickness 7/16 pitch of stays to ditto 5 1/2 inches how stays are secured with nuts  
 Working pressure by rules            diameter of stays at smallest part 1 5/8 also diagonal            working pressure by rules             
 Thickness of bottom plates at bottom, thickness 5/8<sup>th</sup> Back plates, thickness 5/8<sup>th</sup> greatest pitch of stays 7 1/2<sup>th</sup> working pressure by rules           



