

# REPORT ON MACHINERY.

Received at London Office

Date of writing Report 1-7-1914 When handed in at Local Office 2-7-1914 Port of **SUNDERLAND.**  
 No. in Survey held at **Sunderland & Antwerp.** Date, First Survey **23 Feb.** Last Survey **1-7-14 & 6-10-14**  
 Reg. Book. on the **S.S. HANS JENSEN** (Number of Visits **32+6=38**) Gross **1778** Tons Net **1383**  
 Master - **Kjofod** Built at **Antwerp** By whom built **Antwerp Engineering Co. Ltd (S.N. 69)** When built **1914**  
 Engines made at **Sunderland** By whom made **George Rank Ltd (N. 1006)** when made **1914**  
 Boilers made at **Sunderland** By whom made **George Rank Ltd (N. 1006)** when made **1914**  
 Registered Horse Power Owners **Inst. Dampskibsselskab "Rosita"** Port belonging to **Copenhagen.**  
 Nom. Horse Power as per Section 28 **187** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **No**

**ENGINES, &c.**—Description of Engines **Triple expansion** No. of Cylinders **3** No. of Cranks **3**  
 Dia. of Cylinders **20" 31" 53"** Length of Stroke **36** Revs. per minute **× 70** Dia. of Screw shaft as per rule **1 1/4"** Material of screw shaft **Steel**  
 Is the 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  
 in the propeller boss **yes** If the liner is in more than one length are the joints burned **—** If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive **—** If two  
 liners are fitted, is the shaft lapped or protected between the liners **—** Length of stern bush **3'-9"**  
 Dia. of Tunnel shaft as per rule **9.846"** Dia. of Crank shaft journals as per rule **10.34"** Dia. of Crank pin **10 1/2"** Size of Crank webs **15x6 5/8"** Dia. of thrust shaft under  
 collars **10 3/4"** Dia. of screw **14'-0"** Pitch of Screw **15'-0"** No. of Blades **4** State whether moveable **no** Total surface **66 sq ft**  
 No. of Feed pumps **2** Diameter of ditto **2 3/4"** Stroke **20"** Can one be overhauled while the other is at work **yes**  
 No. of Bilge pumps **2** Diameter of ditto **3 1/2"** Stroke **20"** Can one be overhauled while the other is at work **yes**  
 No. of Donkey Engines **Two** Sizes of Pumps **Ballast 6x7x7" Feed 5 1/4x3 1/2x5"** No. and size of Suctions connected to both Bilge and Donkey pumps,  
 In Engine Room **2 of 2 3/4"** In Holds, &c. **1 Hold 2 of 2 3/4" 1 Hold 2 of 2 1/4"**  
 No. of Bilge Injections **1** sizes **3"** Connected to condenser, or to circulating pump **Yes** Is a separate Donkey Suction fitted in Engine room & size **Yes**  
 Are all 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**  
 Are all connections with the sea direct on the skin of the ship **Yes** Are they Valves or Cocks **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 **None** How are they protected **—**  
 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**  
 Dates of examination of completion of fitting of Sea Connections **9-7-14** of Stern Tube **9-7-14** Screw shaft and Propeller **9-7-14**  
 Is the Screw Shaft Tunnel watertight **Yes** Is it fitted with a watertight door **Yes** worked from **Main deck level.**

**BOILERS, &c.**—(Letter for record **S**) Manufacturers of Steel **Johns & Sons Ltd & Selenkischener Bagwerke-Actien Gesellschaft**  
 Total Heating Surface of Boilers **2940 sq ft** Is Forced Draft fitted **no** No. and Description of Boilers **Two single ended marine.**  
 Working Pressure **180** Tested by hydraulic pressure to **360** Date of test **17-6-14** No. of Certificate **3225**  
 Can each boiler be worked separately **Yes** Area of fire grate in each boiler **36 sq ft** No. and Description of Safety Valves to  
 each boiler **two direct spring** Area of each valve **5.940"** Pressure to which they are adjusted **180 lbs.** Are they fitted with easing gear **Yes**  
 Smallest distance between boilers or uptakes and bunkers or woodwork **14"** Mean dia. of boilers **13'-0"** Length **10'-0"** Material of shell plates **Steel**  
 Thickness **1"** Range of tensile strength **29 1/2-33** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **DR**  
 long. seams **DRS, TR** Diameter of rivet holes in long. seams **1 1/16"** Pitch of rivets **7/16"** Lap of plates or width of butt straps **16"**  
 Per centages of strength of longitudinal joint rivets **89** plate **85.4** Working pressure of shell by rules **180 lbs.** Size of manhole in shell **16x12"**  
 Size of compensating ring **flanged** No. and Description of Furnaces in each boiler **2 maison bon** Material **Steel** Outside diameter **3'-10 1/8"**  
 Length of plain part top **—** bottom **—** Thickness of plates crown **3/32"** bottom **3/16"** Description of longitudinal joint **welded** No. of strengthening rings **—**  
 Working pressure of furnace by the rules **184** Combustion chamber plates: Material **Steel** Thickness: Sides **1 1/16"** Back **1 1/16"** Top **1 1/16"** Bottom **1 3/16"**  
 Pitch of stays to ditto: Sides **10"x9"** Back **9 1/4"x9 3/4"** Top **9"x10"** If stays are fitted with nuts or riveted heads **nuts in use** Working pressure by rules **180**  
 Material of stays **Steel** Diameter at smallest part **2-360"** Area supported by each stay **908 1/4 sq in** Working pressure by rules **203 1/8 lbs** End plates in steam space:  
 Material **Steel** Thickness **1 3/16"** Pitch of stays **2'x16"** How are stays secured **DR** Working pressure by rules **181** Material of stays **Steel**  
 Diameter at smallest part **5.945"** Area supported by each stay **342 sq in** Working pressure by rules **180** Material of Front plates at bottom **Steel**  
 Thickness **1 3/16"** Material of Lower back plate **Steel** Thickness **1 5/16"** Greatest pitch of stays **14 3/4"x9 3/4"** Working pressure of plate by rules **194**  
 Diameter of tubes **3 1/4"** Pitch of tubes **4 1/2"x4 3/8"** Material of tube plates **Steel** Thickness: Front **1 3/16"** Back **3/4"** Mean pitch of stays **11 1/8"**  
 Pitch across wide water spaces **14 1/2"x12"** Working pressures by rules **264** Girders to Chamber tops: Material **Steel** Depth and  
 thickness of girder at centre **20 6 3/4"x7 1/2"** Length as per rule **2'-4 1/2"** Distance apart **9"** Number and pitch of stays in each **2 @ 10"**  
 Working pressure by rules **188** Superheater or Steam chest; how connected to boiler **line** Can the superheater be shut off and the boiler worked  
 separately **—** Diameter **—** Length **—** Thickness of shell plates **—** Material **—** Description of longitudinal joint **—** Diam. of rivet  
 holes **—** Pitch of rivets **—** Working pressure of shell by rules **—** Diameter of flue **—** Material of flue plates **—** Thickness **—**  
 If stiffened with rings **—** Distance between rings **—** Working pressure by rules **—** End plates: Thickness **—** How stayed **—**  
 Working pressure of end plates **—** Area of safety valves to superheater **—** Are they fitted with easing gear **—**

22, 24, 27, 29, 31, 36, 8



