

WED. MAR. 18. 1914

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Wm. Taylor & Co. Kildheim 9 Ruhr
 Total Heating Surface of Boilers 8612 sq Is Forced Draft fitted yes No. and Description of Boilers 3 Single end, multitubular
 Working Pressure 213 lbs Tested by hydraulic pressure to 426 lbs Date of test 7/13/14 No. of Certificate 234, 235 & 236
 Can each boiler be worked separately yes Area of fire grate in each boiler 65 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 17.57 sq Pressure to which they are adjusted 213 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-2" Mean dia. of boilers 15'-5" Length 11'-6" Material of shell plates Steel
 Thickness 1.42" Range of tensile strength 28-32 Tons Are the shell plates welded or flanged — Descrip. of riveting: cir. seams lap, dk, riv.
 long. seams dbl. butt, quad. Diameter of rivet holes in long. seams 1.5" Pitch of rivets 19.4" Lap of plates or width of butt straps 1.42x30"
 Per centages of strength of longitudinal joint rivets 105% Working pressure of shell by rules 230 lbs Size of manhole in shell 11.8x15.75"
 plate 92.2% Size of compensating ring 1.42x28.4x31.5 No. and Description of Furnaces in each boiler 3 horizontal Material Steel Outside diameter 49.25"
 Length of plain part 5" Thickness of plates 6" Description of longitudinal joint welded No. of strengthening rings none
 Working pressure of furnace by the rules 230 lbs Combustion chamber plates: Material Steel Thickness: Sides 71" Back 67" Top 67" Bottom 95"
 Pitch of stays to ditto: Sides 7.5x7.8" Back 7.5x7.8" Top 7.5x7.8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 277 lbs
 Material of stays Steel Diameter at smallest part 1.45" Area supported by each stay 59 sq. ft. Working pressure by rules 240 lbs End plates in steam space:
 Material Steel Thickness 1.14" Pitch of stays 5.75x13.75" How are stays secured dbl. nut and wash. Working pressure by rules 228 lbs Material of stays Steel
 Diameter at smallest part 3" Area supported by each stay 248 sq. in. Working pressure by rules 296.5 lbs Material of Front plates at bottom Steel
 Thickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 19.68" Working pressure of plate by rules 228 lbs
 Diameter of tubes 2.5" Pitch of tubes 3.66" Material of tube plates Steel Thickness: Front 1.02" Back .9" Mean pitch of stays 7.3"
 Pitch across wide water spaces 13.75" Working pressures by rules 216 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8.87x1.57" Length as per rule 31.5" Distance apart 7.8" Number and pitch of stays in each 3-7.5"
 Working pressure by rules 224 lbs Superheater or Steam chest; how connected to boiler — 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 —

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *1 1/4 crankshaft, 1 Propellershaft, 1 bronze propellerblade, 1 set of slides with nuts for one blade, 1 slide rod, 1 set of piston rings for each cylinder, 2 pump links one for each side, 1 piston rod for air pump with bucket, 1 water wheel & shaft and 1 eccentric strap coupl. for centrifugal pump, 1 set of connecting rod top and bottom end brasses, 4 bolts with nuts for connecting rod top end and 2 bolts with nuts for bottom end of same, 2 main bearing bolts with nuts, 2 set of coupling bolts one of each size, 1/2 set of jacking bolts for each piston, 1 set of valves for air pump, 1/2 set of valves with seats for bilge and feed pumps, 2 springs for safety valves of main Boilers, 1 spring for safety valves of donkey boiler, several springs for escape valves of cylinders, 1/2 set of fire*

The foregoing is a correct description,

HOWALDTSWERKE
Schwanitz Manufacturer.

bars, 25 condenser tubes with ferals, 25 tubes for main boilers, a large number of spare articles for auxiliary engines, studs, nuts, bolts, rivets, plates and bar iron assorted.

Dates of Survey while building: During progress of work in shops -- *25/4, '15, '16, 4/7, 9/8, '19, '17/9, 2/10, 28/10, '11, 29/11, '12, '17/12, 29/12, 19/13, 2/1, 7/11, '15, 19/14*
During erection on board vessel -- *22/1, 29/1, 10/2, 21/2, 27/2, 5/3 & 10/3 1914*
Total No. of visits *24*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *28, 10, 13* Slides *29, 11, 13* Covers *17, 12, 13* Pistons *29, 11, 13* Rods *28, 10, 13*
Connecting rods *26, 11, 13* Crank shaft *15, 12, 13* Thrust shaft *15, 12, 13* Tunnel shafts *15, 12, 13* Screw shaft *29, 12, 13* Propeller *15, 13, 13*
Stern tube *29, 12, 13* Steam pipes tested *5, 3, 14* Engine and boiler seatings *27, 2, 14* Engines holding down bolts *27, 2, 14*
Completion of pumping arrangements *5, 3, 14* Boilers fixed *21, 2, 14* Engines tried under steam *10th March*
Main boiler safety valves adjusted *10/5 14* Thickness of adjusting washers *For boiler 3/4 3/4 1 1/4, 1 1/4 1 1/4 1 1/4, 1 1/4 1 1/4, 1 1/4 1 1/4, 1 1/4 1 1/4*
Material of Crank shaft *Steel* Identification Mark on Do. *314 315 316* Material of Thrust shaft *Steel* Identification Mark on Do. *932 X, X*
Material of Tunnel shafts *Steel* Identification Marks on Do. *318 X, X* Material of Screw shafts *Steel* Identification Marks on Do. *319 X, X*
Material of Steam Pipes *Steel* Test pressure *450 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c. *Specification of Donkey Pumps.*)

- a) 2 Simplex Weir pumps double acting 11 x 7 7/8 x 20 3/4" for Feed Boilers*
- b) 2 Simplex " " " 9 x 5 1/4 x 10" " Main & Deckwash.*
- c) 1 " " " 9 x 8 1/2 x 10" " Ballast & Bilge in Eng. Room.*
- d) 1 " " " 9 x 8 1/2 x 10" " " " Foreward*
- e) 1 " " " 7 1/2 x 5 3/4 x 6" " Deckwash*
- f) 2 " compound " " 18" x 14 x 22" " Cargo Oil and Ballast*

Material and workmanship of these Engines and Boilers are of best description, the outfit is ample. The Testes of the Boiler Steel material, signed by the Testing Surveyor, are in my hands. Forgings certificates of shafting will be found attached. I attended to a satisfactory trial trip on the 10th March, when the machinery gave full satisfaction. The machinery and Boilers of this Vessel having been constructed under Special Survey in accordance with the Society's Rules, I beg to recommend that they be classed and **LMC 3, 14** be entered in the Register Book and that a certificate to this effect be issued.

The amount of Entry Fee *65* : When applied for, *9. 3. 1914* It is submitted that *this vessel is eligible for*
Special *1051* : *THE RECORD. + LMC 3.14*
Donkey Boiler Fee *45* : When received, *F.D.*
Travelling Expenses (if any) *304* : *13. 3. 1914*
Steel Testing *185*
Committee's Minute *FRI. MAR. 20. 1914*
Assigned *+ LMC 3.14*

Certificate (if required) to be sent to Recording Office

