

REPORT ON MACHINERY.

No. 7165.

MON. SEP 24 1906

Port of Antwerp

Received at London Office

No. in Survey held at Seraing & Hoboken Date, first Survey Jan. 26 Last Survey Sept. 12 1906

Reg. Book. pp. 2 on the S.S. "Witiaz" (Number of Visits 16) Tons Gross 1619

Master Markeritz Built at Hoboken By whom built John Cockerill When built 1906

Engines made at Seraing By whom made John Cockerill when made 1906

Boilers made at do. By whom made do. when made 1906

Registered Horse Power _____ Owners Soc. Ruess d'assurance et de Transport. Port belonging to Odessa

Nom. Horse Power as per Section 28 262 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion Vert. No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 22 7/16 x 35 13/16 x 57 1/2 Length of Stroke 43 5/8 Revs. per minute 87 Dia. of Screw shaft as per rule 12.44 Material of Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 stopped 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 4' 7"

Dia. of Tunnel shaft as per rule 11.1 Dia. of Crank shaft journals as per rule 11 5/8 Dia. of Crank pin 11 7/8 Size of Crank webs 4 1/2 x 7 1/2 Dia. of thrust shaft under collars 11 7/8 Dia. of screw 13 ft. Pitch of Screw 16-5" No. of Blades 4 State whether moveable Yes Total surface 58 sq

No. of Feed pumps 2 Diameter of ditto 7" Stroke 18" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 20" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 9 x 11 3/4 x 10 x 7 1/2 x 5 x 5 3/4 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 2 1/2" In Holds, &c. Two 2 1/2" in each hold.

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump pumps a separate Donkey Suction fitted in Engine room & size 2 1/2"

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 valves

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 suctions to fore hold How are they protected wood casing

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 13/6/06 of Stern Tube 13/6/06 Screw shaft and Propeller 25/6/06 12/9/06

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Engine Room

BOILERS, &c.—(Letter for record S) Manufacturers of Steel John Cockerill, Thyssen & Duisburg, Essen, &c.

Total Heating Surface of Boilers 3614 sq Is Forced Draft fitted Yes No. and Description of Boilers 2 Single Ended.

Working Pressure 170 Tested by hydraulic pressure to 340 Date of test 15.6.06 No. of Certificate 9

Can each boiler be worked separately Yes Area of fire grate in each boiler 49 sq No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 170" Pressure to which they are adjusted 175 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 159 1/2" Length 118" Material of shell plates Steel

Thickness 1 3/16 Range of tensile strength 27-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams S.R.

long. seams S.R. Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 7 3/16 Top of plates width of butt straps 17 3/4

Per centages of strength of longitudinal joint rivets 99.4 Working pressure of shell by rules 185 Size of manhole in shell 16 3/4 x 12 3/4

Size of compensating ring 34 x 15/16 No. and Description of Furnaces in each boiler 3 horizon Material Steel Outside diameter 43 7/16

Length of plain part top 21" Thickness of plates as above 9/16 Description of longitudinal joint welded No. of strengthening rings Yes

Working pressure of furnace by the rules 180 Combustion chamber plates: Material Steel Thickness: Sides 19/32 Back 19/32 Top 19/32 Bottom 25/32

Pitch of stays to ditto: Sides 8 1/4 x 8 1/4 Back 8 x 7 1/8 Top 8 x 7 1/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 190

Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 650" Working pressure by rules 175 End plates in steam space:

Material Steel Thickness 31/32 Pitch of stays 16 1/2 How are stays secured washers Working pressure by rules 176 Material of stays Steel

Diameter at smallest part 25/8 Area supported by each stay 2720" Working pressure by rules 200 Material of Front plates at bottom Steel

Thickness 25/32 Material of Lower back plate Steel Thickness 5/8 Greatest pitch of stays plate ditto Working pressure of plate by rules 170

Diameter of tubes 2 1/2 Pitch of tubes 315/32 Material of tube plates Steel Thickness: Front 25/32 Back 25/32 Mean pitch of stays 6 21/32

Pitch across wide water spaces 14 1/2 Working pressures by rules 170 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 3/4 x 1 1/2 Length as per rule 25" Distance apart 7 7/8 Number and pitch of stays in each 2-8"

Working pressure by rules 200 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 _____ Thickness _____

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 _____

Lloyd's Register
FOW 660-10119

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 Reg. Book _____

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 _____ Rivets _____ Plates _____

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

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 _____ Stayed by _____

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

SPARE GEAR. State the articles supplied: — 2 connecting rod, top end bolts & nuts
 2 bottom end bolts & nuts, 2 main bearing bolts, 1 set of
 coupling bolts, 1 set of feed & bilge pump valves, 1 crank shaft
 piston rod, valve rods, propeller blades.

The foregoing is a correct description,
 Le Secrétaire, Le Directeur Général,
 Société Générale de Construction Mécanique, Manufactureur.

Dates of Survey while building

During progress of work in shops - -	1906 January 26, March 13, April 6, 27, June 8, 15.
	June 25, 26, July 10, 11, August 3, 11, 20, 22, Sept 8, 12.
	Total No. of visits 16.

Is the approved plan of main boiler forwarded herewith No Yes

Dates of Examination of principal parts—

Cylinders	27/4/06	Slides	25/6/06	Covers	25/6/06	Pistons	27/4/06	Rods	27/4/06
Connecting rods	25/6/06	Crank shaft	15/6/06	Thrust shaft	15/6/06	Tunnel shafts	15/6/06	Screw shaft	25/6/06
Stern tube	13/6/06	Steam pipes tested	22/6/06	Engine and boiler seatings	13/6/06	Engines holding down bolts	30/8/06	Propeller	12/9/06
Completion of pumping arrangements	30/8/06	Boilers fixed	30/8/06	Engines tried under steam	22/9/06				
Main boiler safety valves adjusted	30/8/06	Thickness of adjusting washers	7/16"						
Material of Crank shaft	Steel	Identification Mark on Do.	25.6.06	Material of Thrust shaft	Steel	Identification Mark on Do.	25.6.06		
Material of Tunnel shafts	Steel	Identification Marks on Do.	do.	Material of Screw shafts	Steel	Identification Marks on Do.	do.		
Material of Steam Pipes	Copper	Test pressure	340 lbs per sq in						

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

The machinery of this vessel has been constructed under special survey and in accordance with the Rules. The materials are good and the workmanship is good.

The feed pumps are independent engines and are fitted with automatic speed regulators.

The steel used in the construction of the boilers and in the manufacture of the shafting has been tested in accordance with the Rules by the Society's Surveyors.

The Boilers were tested by hydraulic pressure to 240 lbs.

The machinery and boilers are in good order and eligible in my opinion for the record of + R.H.C. 9.06

It is submitted that this vessel is eligible for THE RECORD + R.H.C. 9.06. FD No light.

The amount of Entry Fee..	£ 2 : 0 : 0	When applied for,	1919
Special (B.F.B.)	£ 33 : 2 : 0		1919
Donkey Boiler Fee	£ 2 : 2 : 0	When received,	24/9/06
Travelling Expenses (if any)	£ 10 : 13 : 0		25/9/06
	£ 45 : 17 : 0		

J. J. Cornish
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned + L.H.C. 9.06
 F.D. Elec. light

MACHINERY CERTIFICATE WRITTEN



Certificate (if required) to be sent to Committee's Minute.

STEEL
 T PLATE
 Bar Keo
 BOARD
 to actual
 thickness in
 of Doubl
 Bottom.
 UBLINGO
 length
 end
 thickness
 OP SIDES
 EDGE SH
 RECASTL
 Manu
 manufactu
 ates, Pla
 RAMES
 EVERS
 IOWER MA
 owsprit
 opmasts,
 rigging,
 ails.
 EQUIP
 umber of
 certificate.
 2037
 2047
 7038
 6851
 6785
 Number
 Certificat
 3944
 944
 944
 Iron Steam
 or Steel V
 Boats
 Pumps,
 Windlas
 Engine
 What ar
 Coal Bu
 Number
 Ceiling
 Cargo H
 State size
 Number
 pla
 Bulwar
 The abov
 Builder's

No. in
 Reg. Book
 Cupp 2 on
 Master
 Engines ma
 Boilers ma
 how
 Registered
 MULTI
 (Letter for
 Boilers
 No. of Ce
 safety val
 Are they
 Smallest
 Material
 Descrip.
 Lap of
 rules
 boiler
 Descrip
 plates
 Top
 smalles
 Pitch
 Area s
 Lower
 Pitch
 water
 girder
 Work
 separ
 holes
 If str
 Wor
 VE
 Mao
 Wo
 No.
 ent
 stre
 La
 Ra
 TH
 ph
 Soc
 249-0