


of CARDIFF.

20th. August 1919.

James Murdoch.

the Ministry of Shipping and acting on instructions received from the Committee of Lloyd's Register survey the Machinery of the Ex-German Steel Twin Screw Steamer "ADOLPH WOERMANN", 6257 tons gross, of Hamburg for the purpose of ascertaining the present condition of her machinery, and in company with Mr. Nichol, Superintendent Engineer, representing the new Managing Owners and Mr. Lewis, Surveyor to the Board of Trade, also Mr. G. Evans, Surveyor to the Norske Veritas Society, the undersigned examined the machinery of the vessel whilst laying afloat in Queen Alexandra Dock, and in Mount Stuart Dry Dock, Cardiff, on 3rd. day of June 1919 and on subsequent dates.

The classification certificates were examined and noted that the vessel is classed in the Germanischer Lloyd as follows :—

100 A (S +  March 1918

M.C. March 1918.

Present Managing Owners, Geo Thomson & Co., Ltd., London.

Port of Registry. London.

The vessel dry docked at this time.



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A general examination was made of the Machinery as follows :-

The Port and Starboard Engines, cylinders, pistons, slide valves, cranks, thrust and tunnel shafting and main pumps opened out for examination and condensers tested.

Refrigerating, Electric and Auxiliary Engines together with all pumps opened out, examined, repaired or renewed as necessary.

Oil ways put in order in L. P. Slide Valves.

New ranebottom ring supplied and fitted in both H.P. cylinders, H.P., M.P. & L.P. bottom end brasses, 61 halves of Port Main Engine remetalled.

New rings fitted to Port & Starboard Main Engine H. P. piston rods.

H.P. & M.P. piston valve rings examined and adjusted.

Main bearings and bottom ends examined and adjusted.

Port M.P. main engine crosshead trued up in lahte and brasses remetalled.

All packings in Main Engine Glands overhauled and made good.

Starboard propeller taken off, Cedarval gland examined and put in order

Telegraphs overhauled dial replaced with English lettering.

German names altered to English on all valves, etc.

Steam Steering Engine examined and adjusted.

Electric wiring throughout ship overhauled and made good.

Other minor repairs effected.

#### Boilers.

Main Boilers examined internally and externally together with their safety valves, mountings and doors.

All valves and cocks skimmed and ground in where necessary.

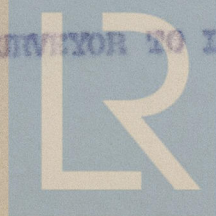
Safety valves adjusted under steam to 200 lbs. per square inch.

Other minor repairs effected.

In my opinion as far as can be judged from inspection of the parts now examined the vessel appears to be in a fit condition to run for a period of six months.

*James Hurdock.*

ENGINEER SUPERVISOR TO LLOYD'S REGISTER.



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W510 - 0032 1/6



S.S. "ADOLPH WOEDHAUT".

Built by Richersteig Schiffwerfte under Maschinenfabrik 1906.

Distinguishing signals R. P. H. V.

Dian. of Cylinders.

Propeller.

Port.	Starb <sup>d</sup> .	
H. P. = 21 1/2 inches.	H. P. = 21 5/8 inches.	Pitch = 19 feet.
M. P. = 38 1/2 "	M. P. = 38 1/2 "	
L. P. = 60 "	L. P. = 60 "	

Spare Tail Shaft - Two (one in each tunnel).

Steering Engine. - Top of engine room, controlled by telemotor and Hand gear.

AUXILIARIES.

Two Howdens forced draught engines, one fan.

One Evaporator to Condenser and distiller.

Two electric engines and dynamos, 250 Amperes each.

Two fresh water pumps, one ash ejector pump.

Two Weirs feed pumps. One ballast pump. (Pulcometer).

One Horizontal sanitary pump. Two Centrifugal Circulating pumps.

One feed water heater. One filter.

One distiller. One Refrigerating Machine (ammonia).

BOILERS.

Five single ended boilers (Howdens Forced draught).

Three furnaces each boiler. Length of boiler = 3670m.m. Dia = 4400m.m.  
2559

Length of Furnace = 2225m.m. Dia. of furnace = 1150m.m. 1050m.m.

Thickness of Furnace = 16m.m.

No. of tubes in one boiler including stays 286.

Inside diam. of tubes = 3 inches. Stay tubes = 3 inches.

Working pressure = 200 lbs per sq. in.

Port forward boiler built and fitted in ship 1911.

Combustion chamber top to lowest water level 170 m.m.

REFRIGERATOR CHAMBERS.

Insulation renewed throughout, also hatch boarding in Meat room, Fish room and Vegetable room. Beer room two sides only renewed. Charcoal and powdered cork has been used for insulation.



All liquid and expansion ammonia pipes have been replaced and rejointed.

Extra overhead expansion pipes have been fitted in heat room and connected to original headers.

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SPARE GEAR.

MAIN ENGINES.

Two valve spindles.	One Tumbling Block.
Two sets brasses for eccentric rods.	Liners for crosshead bearing.
Six propeller bolts and nuts.	Two Holding down bolts.
Eight H.P. Piston Rings.	One set I.P. Pistons Rings.
One Air Pump Head Valve (complete).	Two I.P. Pistons Rings.
One set front pump links.	One set back pump links.
One Spare collar for Thrust.	One Crank pin bearing.
Two spare nuts for propellers.	Two spare tail end shafts.
Two spare propeller blades (No 4 Hold)	Twelve coupling bolts.
Two bottom end bolts.	Two top end bolts.
One set crank brasses (Bottom end).	One set top end brasses.
One Guide shoe.	One Thompson coupling.
One Anchor bolt for main feed pumps.	

AUXILIARIES.

WATER PUMPS.

Suction and delivery valves, 2 sets each complete with valves.	
Eight Piston Rings.	Ten Woodite Bucket Rings.
Two spare shuttle valve spindles.	Twenty-four Valve springs.

STEAM PUMPS.

One Eccentric and rod.	One Cylinder cover.
One Valve spindle bracket.	One Eccentric sheave.
One cylinder and valve chest.	Eight spare piston rings.

WATER PUMP.

Two bucket rings. Two piston rings. Two seats with valves for water end.

FRESH WATER PUMPS.

Large Pump.

Two seat with valves for water end.	Eight Woodite rings.
One valve spindle.	Two piston rings.

Small Pump.

Two piston rings.	Two spare piston rods.
Two sets with valves for water end.	



DYNAMO ENGINES.

One H. P. Piston.

One connecting rod with brasses.

Two H. P. Piston rings.

Four L.P. Piston rings.

One L. P. Piston.

One Crosshead and shoe.

One valve spindle.

SANITARY PUMP.

Two Piston rings.

REFRIGERATOR.

One Compressor Piston complete.

One Expander " "

Two charging cocks.

One Compression Cylinder & Valves.

One Slide valve spindle & Valves (Complete).

One Set main bearings.

Two suction cocks for compressor.

Two Delivery " " "

One Condenser coil.

One Steam rod.

One Ammonia rod.

One Gland (ammonia).

" " (steam).

One set steady bolts.

8 white metal rings for glands.

WINCHES.

One exhaust valve cover.

Twenty-four pins for valve gear.

Four pins for drag links.

One stop valve cover.

One piston rod.

Seven crosshead pins.

SUNDRY GEAR .

One Donkey check valve.

Two Bevel gear wheels for steering gear.

One valve rod for steering engine.

Two valve boxes complete ( $1\frac{1}{2}$ " and  $1\frac{1}{4}$ " bore).

Two safety valve springs (Main Boilers). 3 Relief valve springs.

One blow down valve.

One brass cog rack.

*James Murdoch.*

ENGINEER SURVEYOR TO LLOYD'S REGISTER.



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