Rpt. 5.

REPORT ON BOILERS

No. 57

Received at London Office TUE. 25 JAN. 1916

Date of writing Report 10th Jan 1916 When handed in at Local Office 10th Jan 1916 Port of Cleveland Ohio

No. in Reg. Book. Survey held at Ashtabula Date, First Survey 18th Nov Last Survey 10th Dec 1916

(Number of Visits 4)

on the S.S. "Morris Adler" now "Tip Top" Tons Gross / Net

Master Built at Ashtabula By whom built Great Lakes Engin. Works When built 1915

Engines made at Detroit By whom made Great Lakes Engin. Works when made 1915

Boilers made at Chicago By whom made Link Belt Company when made 1915

Registered Horse Power Owners Einar Stensrud Port belonging to Cleveland

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—

Manufacturers of Steel ____ *Is forced draft fitted* ____ **No. and Description of Boilers** ____

(*Letter for record* ____) **Total Heating Surface of Boilers** ____ **Working Pressure** ____ *Tested by hydraulic pressure to* ____ *Date of test* ____

No. of Certificate ____ *Can each boiler be worked separately* ____ **Area of fire grate in each boiler** ____ *No. and Description of safety valves to each boiler* ____ *Area of each valve* ____ *Pressure to which they are adjusted* ____

Are they fitted with easing gear ____ *In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler* ____

Smallest distance between boilers or uptakes and bunkers or woodwork ____ *Mean dia. of boilers* ____ *Length* ____

Material of shell plates ____ *Thickness* ____ *Range of tensile strength* ____ *Are the shell plates welded or flanged* ____

Descrip. of riveting: cir. seams ____ long. seams ____ *Diameter of rivet holes in long. seams* ____ *Pitch of rivets* ____

Lap of plates or width of butt straps ____ *Per centages of strength of longitudinal joint* rivets ____ plate ____ *Working pressure of shell by rules* ____ *Size of manhole in shell* ____ *Size of compensating ring* ____ **No. and Description of Furnaces in each boiler** ____ *Material* ____ *Outside diameter* ____ *Length of plain part* top ____ bottom ____ *Thickness of plates* crown ____ bottom ____

Description of longitudinal joint ____ *No. of strengthening rings* ____ *Working pressure of furnace by the rules* ____ *Combustion chamber plates:* *Material* ____ *Thickness:* *Sides* ____ *Back* ____ *Top* ____ *Bottom* ____ *Pitch of stays to ditto:* *Sides* ____ *Back* ____ *Top* ____ *If stays are fitted with nuts or riveted heads* ____ *Working pressure by rules* ____ *Material of stays* ____ *Diameter at smallest part* ____ *Area supported by each stay* ____ *Working pressure by rules* ____ *End plates in steam space:* *Material* ____ *Thickness* ____ *Pitch of stays* ____ *How are stays secured* ____ *Working pressure by rules* ____ *Material of stays* ____ *Diameter at smallest part* ____ *Area supported by each stay* ____ *Working pressure by rules* ____ *Material of Front plates at bottom* ____ *Thickness* ____ *Material of Lower back plate* ____ *Thickness* ____ *Greatest pitch of stays* ____ *Working pressure of plate by rules* ____ *Diameter of tubes* ____ *Pitch of tubes* ____ *Material of tube plates* ____ *Thickness:* *Front* ____ *Back* ____ *Mean pitch of stays* ____ *Pitch across wide water spaces* ____ *Working pressures by rules* ____ *Girders to Chamber tops:* *Material* ____ *Depth and thickness of girder at centre* ____ *Length as per rule* ____ *Distance apart* ____ *Number and pitch of Stays in each* ____ *Working pressure by rules* ____ *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—

No. one *Description* Vertical Tubular *Manufacturers of steel* Ohio Steel Co

Made at Chicago *By whom made* Link Belt Co *When made* 1915 *Where fixed* On Deck Crane *Working pressure* 125 lbs

tested by hydraulic pressure to 188 *Date of test* 18.11.15 *No. of Certificate* ____ *Fire grate area* 12.5 *Description of safety valves* Spring. Pop

No. of safety valves 1 *Area of each* 3.141 *Pressure to which they are adjusted* 125 *If fitted with easing gear* Yes *If steam from main boilers can enter the donkey boiler* No *Dia. of donkey boiler* 54" *Length* 8'-3½" *Material of shell plates* Steel *Thickness* 27/16" *Range of tensile strength* 55 to 60 lbs *Descrip. of riveting long. seams* D.R.B.S. *Dia. of rivet holes* 13/16" *Whether punched or drilled* punched & reamed *Pitch of rivets* 4 5/8" *Lap of plating* 11⅞ *Width of butt straps* 1' 5½" *Per centage of strength of joint* Rivets 101 Plates 82.2 *Working pressure of shell by rules* 134 lbs *Thickness of shell crown plates* 7/16" *Radius of do.* ✓ *No. of Stays to do* tubes expanded & headed *Dia. of stays* None *Diameter of furnace* Top 48" Bottom ✓ *Length of furnace* 2.6 13/16" *Thickness of furnace plates* 3/8" ✓ *Description of joint* S.R. Lap tubes expanded *Working pressure of furnace by rules* 125 lbs *Thickness of furnace crown plates* 7/16" *Radius of do.* ✓ *Stayed by* ✓ headed *Diameter of uptake* None *Thickness of uptake plates* ✓ *Thickness of water tubes* ✓.

The foregoing is a correct description,

Link-Belt Company *Manufacturer.*

W.D. Kingman - Pres.

Dates of Survey while building

During progress of work in shops Oct. 1915

During erection on board vessel Nov 18. 22.- Newyork. Dec 8.10.

Total No. of visits 4

Is the approved plan of main boiler forwarded herewith ✓

" " " *donkey* " " " Yes

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GENERAL REMARKS (*State quality of workmanship, opinions as to class, &c.*

This boiler was examined when fitted aboard, and the material & workmanship found good.

It was tried by hydraulic pressure to 188 lbs per □" & found tight: this boiler is eligible in my opinion for a working pressure of 185 lbs per □", when the safety valves have been adjusted under steam to this pressure

The Donkey boiler safety valve adjusted to blow at 125 lbs per □

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee...	£	:	:	When applied for,
Special	£	:	:	....19....
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any))	£	:	:	....19....

A. T Thomas. P. Hudson.

Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 28 JAN. 1916 TUE. 14 MAR. 1916

Assigned .....

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