

## REPORT ON BOILERS.

No. 15831

WFO &amp; EMAR 1924

Date of writing Report 7<sup>th</sup> Febr. 1924 When handed in at Local Office

Port of HAMBURG

No. in Survey held at TIEL.  
Reg. Book.Date, First Survey 24<sup>th</sup> April. 1923. Last Survey 31<sup>st</sup> January 1924

(Number of Visits 16

Gross 1544.

Tons Net 844.

on the Steel S.S. "FRIESLAND"

Master Built at TIEL. By whom built Fried. Krupp, Germaniawerft A.G. When built 1924.

Engines made at TIEL. By whom made Fried. Krupp, Germaniawerft A.G. When made 1924.

Boilers made at TIEL. By whom made Fried. Krupp, Germaniawerft A.G. When made 1924.

Registered Horse Power 224. Owners Scheepvaart en Steenkolen Maats. Port belonging to ROTTERDAM.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Colville &amp; Sons, Glasgow.

(Letter for record S. ) Total Heating Surface of Boilers 3672 sq. ft. Is forced draft fitted no No. and Description of

Boilers 2 single ended multitubular. Working Pressure 13 kg. (185 lb.) Tested by hydraulic pressure to 370 lb. Date of test 10/11/23.

No. of Certificate 338 &amp; 339. Can each boiler be worked separately yes. Area of fire grate in each boiler 5.25 sq. m. No. and Description of

safety valves to each boiler 2 spring loaded. Dia. of each valve 80 mm. Pressure to which they are adjusted 13 kg. (185 lb.).

Are they fitted with easing gear yes. 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 300 mm. Mean dia. of boilers 4100 mm. Length 3128 mm.

Material of shell plates Steel. Thickness 29.5 mm. Range of tensile strength 44-50 kg. Are the shell plates welded or flanged flanged.

Descrip. of riveting: cir. seams d. 6p. riv. long. seams d. butt. riv. Diameter of rivet holes in long. seams 32 mm. Pitch of rivets 216 mm.

Lap of plates or width of butt straps 466 mm. Per centages of strength of longitudinal joint rivets 27.5%. Working pressure of shell by

rules 189 lb. Size of manhole in shell 300 x 400 mm. Size of compensating ring No. and Description of Furnaces in each

boiler 3 Morion. Material Steel. Outside diameter 1050 mm. Length of plain part top Thickness of plates crown 13.5 mm.

Description of longitudinal joint welded. No. of strengthening rings Working pressure of furnace by the rules 186 lb. Combustion chamber

plates: Material Steel. Thickness: Sides 17 mm. Back 16 mm. Top 17 mm. Bottom 22 mm. Pitch of stays to ditto: Sides 185 x 200 Back 185 x 190.

Top 200 x 140. If stays are fitted with nuts or riveted heads nut. Working pressure by rules 250 lb. Material of stays Steel. Diameter at

smallest part 35 mm. Area supported by each stay 85 x 400. Working pressure by rules 187 lb. End plates in steam space: Material Steel. Thickness 20 x 20.

Pitch of stays 420 x 440. How are stays secured d. nut &amp; washer. Working pressure by rules 196 lb. Material of stays Steel. Diameter at smallest part 70 mm.

Area supported by each stay 420 x 440. Working pressure by rules 228 lb. Material of Front plates at bottom Steel. Thickness 26 mm. Material of

Lower back plate Steel. Thickness 22 mm. Greatest pitch of stays 365 mm. Working pressure of plate by rules 303 lb. Diameter of tubes 89 mm.

Pitch of tubes 116 mm. Material of tube plates Steel. Thickness: Front 26 mm. Back 21 mm. Mean pitch of stays 332 mm. Pitch across wide

water spaces 369 mm. Working pressures by rules 223 lb. Girders to Chamber tops: Material Steel. Depth and thickness of

girder at centre 210 x 216. Length as per rule 700 mm. Distance apart 210 mm. Number and pitch of Stays in each 2-200 mm.

Working pressure by rules 263 lb. 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

The foregoing is a correct description,

FRIED. KRUPP  
GERMANIAWERFT

Manufacturer.

Aktiengesellschaft

Dates During progress of 24/4-17/7-24/7-24/8-15/9-24/9-9/10-30/10 Is the approved plan of boiler forwarded herewith yes  
of Survey work in shops - - 10/11/23.  
while During erection on 4/1-15/1-18/1-22/1-28/1-31/1/24 Total No. of visits 16.  
building board vessel - - -

## GENERAL REMARKS (State quality of workmanship, opinions as to class, &amp;c.)

Material and workmanship of

these boilers are of good quality and when tested to 370 lb. per square inch at request of the Owners they showed no weakness and were found to be light and sound in every respect.

Survey Fee ... See attached When applied for. 191

Travelling Expenses (if any) £ very. When received. 191

Friedrich Hill

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

Committee's Minute

FRI. MAR. 7 1924

Assigned

Lloyd's Register  
Foundation