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REPORT ON BOILERS.

No. 4803.

Received at London Office TUE.SEP.-5.1916

of writing Report 31st Aug 1916. When handed in at Local Office ____ 19__ Port of Bilbao

o. in Survey held at Bilbao Date, First Survey 14th April Last Survey 22nd July 1916.
Book. (Number of Visits 9.)

on the Screw Steamer No. 9 "Guadalquivir" No. 2" Tons Gross ____ Net ____

ter ____ Built at Bilbao By whom built Soc Anon Astilleros del Nervion When built ____

ines made at Glasgow By whom made Ross & Duncan (No. 1006). when made 1915

lers made at Bilbao By whom made Soc Anon Astilleros del Nervion when made 1916.

istered Horse Power ____ Owners Jose M. Martinez de las Rivas Port belonging to Bilbao.

ULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel James Dunlop & Co.

tter for record 9.) **Total Heating Surface of Boilers** 2386 ft² Is forced draft fitted No **No. and Description of**
lers Two Single ended boilers **Working Pressure** 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 22-7-16.

of Certificate 12. Can each boiler be worked separately Yes **Area of fire grate in each boiler** 39½ ft² No. and Description of

ty valves to each boiler ____ Area of each valve ____ Pressure to which they are adjusted ____

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

allest distance between boilers or uptakes and bunkers or woodwork ____ Mean dia. of boilers 11'-6" Length 10'-6"

rial of shell plates Steel Thickness 31/32" Range of tensile strength 28-32 Are the shell plates welded or flanged ____

rip. of riveting: cir. seams D.R. long. seams 3R. Double straps Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 3¼" cir. seams 6⅞" long.

of plates or width of butt straps 17½" Per centages of strength of longitudinal joint rivets 83.6% plate 88.5% Working pressure of shell by

180 lbs Size of manhole in shell 12" X 16" Size of compensating ring 28" X 30" X 21/32" **No. and Description of Furnaces in each**

r Two (Deighton's) Material Steel Outside diameter 3'-10¼" Length of plain part top 8 5/16" bottom 8 9/16" Thickness of plates crown 9/16" bottom 9/16"

ription of longitudinal joint welded No. of strengthening rings Susp Working pressure of furnace by the rules 209 Combustion chamber

s: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 11/16" Pitch of stays to ditto: Sides 8¾ x 7¾ Back 8¾ x 8¼

8½ x 7¾ If stays are fitted with nuts or riveted heads ~~nuts both ends~~ Working pressure by rules 187 lbs Material of stays Steel Diameter at

lest part 1.76 Area supported by each stay 8¾ x 8¼ Working pressure by rules 195 lbs End plates in steam space: Material Steel Thickness 31/32"

of stays 16⅜ x 15½ How are stays secured Nuts & washers Working pressure by rules 198 lbs Material of stays Steel Diameter at smallest part 2⅜.

supported by each stay 16⅜ x 15½ Working pressure by rules 180 Material of Front plates at bottom Steel Thickness 27/32" Material of

r back plate Steel Thickness 27/32" Greatest pitch of stays 13½" x 8¾ x 8¼ Working pressure of plate by rules 180 Diameter of tubes 3¼"

of tubes 4⅜ x 4¼ Material of tube plates Steel Thickness: Front 27/32" Back ¾" Mean pitch of stays 8¾ Pitch across wide

spaces 14" Working pressures by rules 244 lbs. Girders to Chamber tops: Material Steel Depth and thickness of

r at centre 7¾ x 1¾ Length as per rule 30" Distance apart 8½ Number and pitch of Stays in each 3 at 7¾

king pressure by rules 185 lbs Superheater or Steam chest; how connected to boiler ____ Can the superheater be shut off and the boiler worked

rately ____ Diameter ____ Length ____ Thickness of shell plates ____ Material ____ Description of longitudinal joint ____ Diam. of rivet

____ Pitch of rivets ____ Working pressure of shell by rules ____ Diameter of flue ____ Material of flue plates ____ Thickness ____

ffened with rings ____ Distance between rings ____ Working pressure by rules ____ End plates: Thickness ____ How stayed ____

king pressure of end plates ____ Area of safety valves to superheater ____ Are they fitted with easing gear ____

RTICAL DONKEY BOILER— No. ____ Description ____ Manufacturers of steel ____

at ____ By whom made ____ When made ____ Where fixed ____ Working pressure ____

by hydraulic pressure to ____ Date of test ____ No. of Certificate ____ Fire grate area ____ Description of safety valves ____

f safety valves ____ Area of each ____ Pressure to which they are adjusted ____ If fitted with easing gear ____ If steam from main boilers can

the donkey boiler ____ Dia. of donkey boiler ____ Length ____ Material of shell plates ____ Thickness ____ Range of tensile

gth ____ Descrip. of riveting long. seams ____ Dia. of rivet holes ____ Whether punched or drilled ____ Pitch of rivets ____

of plating ____ Per centage of strength of joint Rivets ____ Plates ____ Working pressure of shell by rules ____ Thickness of shell crown plates ____

us of do. ____ No. of Stays to do. ____ Dia. of stays ____ Diameter of furnace Top ____ Bottom ____ Length of furnace ____

ness of furnace plates ____ Description of joint ____ Working pressure of furnace by rules ____ Thickness of furnace crown

s ____ Radius of do. ____ Stayed by ____ Diameter of uptake ____ Thickness of uptake plates ____

ness of water tubes ____.

The foregoing is a correct description,

____ Manufacturer.

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ates During progress of work in shops - - } 1916. April 14.19.25. June 2.8. July 12.13.17.22.
urvey During erection on board vessel - - - }
hile
lding Total No. of visits 9. Is the approved plan of main boiler forwarded herewith Yes.

" " " donkey " " "

010624-010630-0081

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

These Boilers have been constructed under Special Survey and in accordance with the approved plans, and the requirements of the Society's Rules.
The materials and workmanship are good.
Boilers have been tested by hydraulic pressure with satisfactory results.

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.....

J. de Mattigabal & John Pollock
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 27 OCT. 1916 FRI. JAN. 19 1917

Assigned