

## REPORT ON WATER TUBE BOILERS.

No.

20595

Received at London Office

11 MAR 1955

Date of writing Report 16-2-55 19

When handed in at Local Office

7/3/

1955

Port of

GENOA

No. in Survey held at

GENOA

Date, First Survey

15-2-54

Last Survey

14-2-55

19

Reg. Book.

on the SINGLE SCREEN

"ARCEA PRIMA"

(Number of Visits 60)

Gross 20771

Net 12172

Built at GENOA - SESTRI

By whom built S.A. ANSALDO - CANTIERI NAVALI.

Yard No. 1494

When built 1955

Engines made at GENOA - SAMPIERDARENA

By whom made S.A. ANSALDO - STABILIMENTO MECCANICO

Engine No. 1513

When made 1954

Boilers made at - ditto -

By whom made - ditto -

Boiler No. 5316

When made 1954

Nominal Horse Power

Owners "ARCEA" COMP. DI NAVIGAZIONE S.p.A. Port belonging to PALERMO.

WATER TUBE BOILERS - MAIN, ~~MINOR OR DONKEY~~ - Manufacturers of SteelRHEINISCHE ROHRENWERKE A.G. MULHEIM.  
SIAC - DALMINE - FABBRICA ITAL. TUBI.

Date of Approval of plan 18-1-54

of Boilers THREE: TWO DRUM FOSTER WHEELER

Working Pressure 47 Kg/cm<sup>2</sup>Tested by Hydraulic Pressure to 74 Kg/cm<sup>2</sup>

No. and Description of Type

4-8-54

30-8-54

16-9-54

No. of Certificate 320-321-322

Can each boiler be worked separately

YES

Total Heating Surface of Boilers

3627 sq. m. (718+116+744) x 3

Is forced draught fitted

YES

Area of Fire Grate (coal) in each Boiler

No. and description of safety valves on

No. and type of burners (oil) in each boiler

THREE - TODD SYSTEM.

each boiler WITH 3/4" SINGLE CONTROL VALVE FITTED ON STEAM DRUM.

Area of each set of valves per boiler

as per rule 25 approved

SAF. VALVE: 7x2.439 in. Pressure to which they

as fitted CONTROL VALVE: 7x0.4459 in.

are adjusted 47.5 Kg/cm<sup>2</sup> Are they fitted with easing gear

YES

the donkey boiler

Smallest distance between boilers or uptakes and bunkers

1500 mm

Height of boiler 8850 mm

Width and length 5800 x 5200 mm

Steam Drums: Number in each boiler

ONE

Inside

RADIUS: 680 x 705 mm

Thickness of plates 90 x 40 mm

Range of tensile strength

49/55 Kg/mm<sup>2</sup>

Are drum shell plates welded

or flanged FUSION WELDED

If fusion welded, state name of welding firm S.A. ANSALDO - STABILIMENTO MECCANICO

Have all the requirements of the Rules

for Class I vessels been complied with

YES

Diameter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

long. joint: Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

50 x 81 mm 15 x 110

Percentage strength of shell in way of tubes

Steam Drum Headers: Ends: Range of tensile strength

42/48 Kg/mm<sup>2</sup>

Thickness of plates 65 mm

Radius

1200 mm

Size of manhole

300 x 400 mm

Water Drums: Number

in each boiler ONE

Inside diameter

840 mm

Thickness of plates

63 mm

Range of tensile strength

44/50 Kg/mm<sup>2</sup>

Are drum shell plates

welded or flanged FUSION WELDED

If fusion welded, state name of welding firm S.A. ANSALDO - STABIL. MECC.

Have all the requirements of the Rules

for Class I vessels been complied with

YES

Diameter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

Percentage strength of long. joint: Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

50 x 100 mm 110

Percentage strength of drum shell in way of tubes

Water Drum Headers: Ends: Range of tensile strength

42/48 Kg/mm<sup>2</sup>

Thickness of plates 42 mm

Radius

750 mm

Size of manhole

300 x 400 mm

Tested by hydraulic pressure to

94 Kg/cm<sup>2</sup>

Headers or Sections: Number THREE

Material S.H. STEEL

Thickness 26 mm

Tested by hydraulic pressure to

94 Kg/cm<sup>2</sup>

Tubes: Diameter 32-51-83-102 mm

Thickness 3-4.5-9-7 mm

Number 1386-222-2-6

Steam Dome or Collector: Description of

oint to shell

Inside diameter

Thickness of shell plates

Range of tensile

strength

Description of longitudinal joint

If fusion welded, state name of welding

firm

Have all the requirements for the Rules for Class I vessels been complied with

Diameter of rivet holes

Pitch of rivets

Thickness of straps

Percentage strength of long. joint

plate

rivet

Crown or End Plates: Range of tensile strength

Thickness

Radius or how stayed

SUPERHEATER, Headers: Number in each boiler

TWO

Inside diameter

228 mm

Thickness 32 mm

Material ONE - S.H. STEEL

Range of tensile strength

45/55 Kg/mm<sup>2</sup>

Are drum shell plates welded

or flanged SEAMLESS

If fusion welded, state name of welding firm

Have all the requirements of the Rules

for Class I vessels been complied with

Description of riveting: Circ. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Thickness of straps

Percentage strength of

long. joint: Plate

Rivet

Diameter of tube holes in header

Pitch of tube holes

57 mm

Percentage strength of

drum shell in way of tubes

Drum Heads or Ends: FLAT

Thickness 38 mm

Range of tensile strength

45/55 Kg/mm<sup>2</sup>

Radius or how stayed

Size of manhole

513 mm

Number, diameter, and thickness of tubes

184-32 mm - 3 mm

Tested by hydraulic pressure to 74 Kg/cm<sup>2</sup>

Date of test 16/9/54, 30/9/54, 11/10/54

Is a safety valve fitted to each section of the superheater

which

COCKBURNS 2 1/4" DOUBLE FULL BORE SAFETY VALVE

Area of each set

to be shut off from the boiler

YES

No. and description of safety valves

WITH 3/4" DOUBLE CONTROL VALVE ON STEAM DRUM.

Pressure to which they are adjusted

45.5 Kg/cm<sup>2</sup>

Is easing gear fitted

YES

Spare Gear. Has the spare gear required by the Rules been supplied

YES

ANSALDO S. A.

STABILIMENTO MECCANICO

The foregoing is a correct description,

Manufacturer.

Dates

During progress of

work in shops -

FROM 15-2-54

To 18-10-54

Is the approved plan of boiler forwarded herewith

No

Survey

while

During erection on

FROM 2-11-54

To 14-2-55

Total No. of visits

60

Building

board vessel -

Is this boiler a duplicate of a previous case

No

If so, state vessel's name and report No.

GENERAL REMARKS

(State quality of workmanship, opinions as to class, & THESE BOILERS HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND ARE IN ACCORDANCE WITH THE APPROVED PLANS, SECRETARY'S LETTERS AND RULE REQUIREMENTS. THE MATERIALS, WORKMANSHIP & WELDING TECHNIQUE GOOD. THE BOILERS HAVE BEEN CONSTRUCTED IN ACCORDANCE WITH THE RULE REQUIREMENTS FOR FUSION WELDED PRESSURE VESSELS OF CLASS 1. THE X-RAY TESTS TAKEN ON THE ENTIRE WELDED SEAMS HAVE BEEN EXAMINED AND WELDING FOUND SOUND. THE RESULTS OF THE ROUTINE TESTS WERE FOUND SATISFACTORY. UPON COMPLETION THE BOILERS HAVE BEEN EXAMINED UNDER HYDRAULIC PRESSURE TO 74 Kg/cm<sup>2</sup> AND FOUND TIGHT AND SOUND IN EVERY DETAIL AT THAT PRESSURE. THEREAFTER THE BOILERS HAVE BEEN SATISFACTORILY FITTED AND FIXED ON BOARD, EXAMINED UNDER STEAM PRESSURE. THEIR SAFETY VALVES ADJUSTED AS ABOVE.

Survey Fee (CAR FUND) £1

19.518=

When applied for

9/12/1954

Travelling Expenses (if any) £1

28.726=

When received

19

REV. TAX £1

22.468=

TUESDAY 26 APR 1955

Date

Committee's

Minute

See Rpt. 4

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation

012.656-012.662-0039