pt. 5c.

# REPORT ON WATER TUBE BOILERS.

No. 12647

Received at London Office 13 OCT 1932

Date of writing Report 28-9-32-19 When handed in at Local Office 7-10-1932. Port of GENOA.

No. in Reg. Bk. 0376. Survey held at GENOA. Date, First Survey JULY 7.th 1930 Last Survey SEPT. 27.th 1932 (Number of Visits 90.)

on the STEEL SCREW STEAMER "REX". Tons Gross 51062. Net 30622.68.

Master ✓ Built at SESTRI PONENTE, GENOA By whom built S.A. ANSALDO. When built 1932.

Engines made at SANPIERDARENA. GENOA By whom made S.A. ANSALDO. When made 1932.

Boilers made at SANPIERDARENA. GENOA. By whom made S.A. ANSALDO When made 1932.

~~Registered~~ NOMINAL Horse Power 22070. Owners "ITALIA" (FLOTTE RIUNITE COSULICH LLOYD SABAUDO NAVIGAZIONE GENERALE) Port belonging to GENOA.

WATER TUBE BOILERS—MAIN, ~~AUXILIARY, OR DONKEY~~ SINGLE ENDED. —Manufacturers of Steel FRIED KRUPP. ESSEN. ENGLISH STEEL CORPORATION, SHEFFIELD. ANSALDO. S.A. GENOA.

(Letter for Record S. ✓) Date of Approval of plan 24-6-1930. Number and Description or Type of Boilers FOUR SINGLE ENDED. BENT TUBE. Working Pressure 27. Kgs CM² Tested by Hydraulic Pressure to 47. Kg CM² Date of Test 4-4-1931, 6-3-1931, 25-4-1931.

No. of Certificate 207, 208, 211, 213 Can each boiler be worked separately YES. ✓ Total Heating Surface of Boilers 2520. SQUARE METRES.

Is ~~forced~~ INDUCED draught fitted YES. ✓ Area of fire grate (coal) in each Boiler ✓ Total grate area of boilers in vessel including Main and Auxiliary ✓ No. and type of burners (oil) in each boiler 9. ANSALDO-AGANINI. No and description of safety valves on each boiler TWO HIGH LIFT, SPRING LOADED. Area of each valve 5026·5 sq. m/m. ✓ Pressure to which they are adjusted 27. Kg. CM². ✓

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~~ 750 m/m. ✓ Height of Boiler 6043. m/m Width and Length 7017 m/m, 4560 m/m

**Steam Drums:**—Number in each boiler ONE. ✓ Inside diameter 1600 m/m Material of plates STEEL ✓ Thickness 25 m/m R 58·5 m/m

Range of Tensile Strength 44 – 50. Kgs. ✓ Are drum shell plates welded or flanged SOLID FORGED. Description of riveting:—

Cir. seams DOUBLE ✓ long. seams ✓ Diameter of rivet holes in long. seams ✓ Pitch of Rivets ✓

Lap of plate or width of butt straps ✓ Thickness of straps ✓ Percentage strength of long. joint:—Plate ✓ Rivet ✓

Diameter of tube holes in drum 40 m/m R 51 m/m Pitch of tube holes 78 m/m R 100 m/m Percentage strength of shell in way of tubes 48·7 R 49·0%

If Drum has a flat side state method of staying ✓ Depth and thickness of girders at centre (if fitted) ✓ Distance apart ✓ Number and pitch of stays in each ✓ Working pressure by rules 30. Kg CM² **Steam Drum Heads or Ends:**—Material STEEL. ✓ Thickness 31·5 m/m R 28·5 m/m Radius ~~or how stayed~~ 900. m/m

Size of Manhole ~~or Handhole~~ 300 m/m × 400 m/m **Water Drums:**—Number in each boiler TWO. ✓ Inside Diameter 850. m/m

Material of plates STEEL. ✓ Thickness 18 m/m R 33·5 m/m Range of tensile strength 44-50. Kgs. Are drum shell plates welded or flanged SOLID FORGED ✓ Description of riveting:—Cir. seams DOUBLE. ✓ long. seams ✓ Diameter of Rivet Holes in long. seams ✓ Pitch of rivets ✓ Lap of plates or width of butt straps ✓ Thickness of straps ✓

Percentage strength of long. joint:—Plate ✓ Rivet ✓ Diameter of tube holes in drum 40 m/m R 51 m/m Pitch of tube holes 78 m/m R 100 m/m

Percentage strength of drum shell in way of tubes 48·7 R 49% **Water Drum Heads or Ends:—Material** STEEL ✓ Thickness 23 m/m

Radius ~~or how stayed~~ 610 m/m ✓ Size of manhole ~~or handhole~~ 300 m/m × 400 m/m **Headers or Sections:**—Number ✓

Material ✓ Thickness ✓ Tested by Hydraulic Pressure to ✓ Material of Stays ✓

Area at smallest part ✓ Area supported by each stay ✓ Working Pressure by Rules ✓ **Tubes:**—Diameter 40 m/m R 51 m/m

Thickness 5·4 m/m, 4·4 m/m 3·9 m/m Number 112 AT 51.7 m/m DIA. 224 - 51.7 m/m DIA 936 " 40.7 m/m DIA **Steam Dome or Collector:**—Description of Joint to Shell DOUBLE RIVETED. ✓

Percentage strength of Joint 65·7% Diameter 780 m/m ✓ Thickness of shell plates 21 m/m ✓ Material STEEL.

Description of longitudinal joint SOLID FORGED. ✓ Diameter of Rivet Holes ✓ Pitch of Rivets ✓ Working Pressure of shell by Rules 51. Kgs CM² **Crown or End Plates:**—Material STEEL. ✓ Thickness 21 m/m ✓ How stayed RADIUS 620 m/m. ✓

SUPERHEATER. Type ANSALDO. Date of Approval of Plan 7.2.31. Tested by Hydraulic Pressure to 47. Kg CM² ✓

Date of Tests 1931. JUNE 18, 20, 27. JULY 2. Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler YES. ✓

Diameter of Safety Valve 60 m/m. ✓ Pressure to which each is adjusted 28. Kgs CM². ✓ Is easing gear fitted YES. ✓

Is a drain cock or valve fitted at lowest point of superheater YES. ✓ Number, diameter, and thickness of tubes No. 76. DIA 40 m/m. THICKNESS 3·9 m/m

Spare Gear. Tubes SEE REPORT FOR DOUBLE ENDED BOILERS. Gaskets or joints:—Manhole ✓ Handhole ✓ Handhole plates ✓

"ANSALDO" Stabilimenti Meccanici Sampierdarena

The Foregoing is a correct description,

Manufacturer.

Dates of Survey while building

During progress of work in shops: 1930. JULY. 7. AUG. 8. 23. 26. SEPT. 2. 22. 30. OCT. 7. 11. 27. NOV. 11. 18. 25. DEC. 5. 9. 19. 30. 1931. JAN. 8. 20. 24. FEB. 3. 12. 20. 26. MAR. 6. 11. 28. APR. 4. 11. 18. 25. 28. MAY. 12. 19. 25. 30. JUNE. 1. 5. 10. 15. 18. 20. 22. 25. 27. JULY. 2. 6. 13. 15. 18. 25. 29. SEPT. 3. 28. 29./

During erection on board vessel: 1931. SEPT. 1. 10. 16. 21. OCT. 5. 18. NOV. 3. 17. 23. DEC. 6. 13. 29. 1932. JAN. 6. 13. FEB. 4. MAR. 3. 14. 29. APRIL. 5. 13. 19. MAY. 9. 16. JULY. 2. 15. 16. 19. 21. AUG. 12. 18. 20. 27. SEPT. 20. 26. 27./

Is the approved plan of boiler forwarded herewith YES.

Total No. of visits NINETY. (90)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) THESE BOILERS HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND ARE IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD AND THE BOILERS WHEN TESTED HYDRAULICALLY TO 47. KG CM² WERE FOUND ENTIRELY SATISFACTORY. THEY HAVE NOW BEEN SATISFACTORILY FITTED ON BOARD THE "REX", THEIR SAFETY VALVES ADJUSTED UNDER STEAM TO 27. KG CM² AND AN ACCUMULATION TEST HELD ON EACH WITH GOOD RESULTS.

DUAL SURVEY L.R. & R.I.

Survey Fee ... ... £ SEE FIRST: When applied for, 19

Travelling Expenses (if any) £ ENTRY MACHINERY REPORT. When received, 19

Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute TUE. 25 OCT 1932

Assigned See other Rpt for 12647

TUE. 3 JAN 1933

FRI. 3 MAR 1933

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