

AMERICAN BUREAU OF SHIPPING
45, Broad Street, New York, N.Y.

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Report No. BN 111.

Buenos Aires 20 April, 1953.

S.S. "PARANA"

THIS IS TO CERTIFY that T. M. Kelpien and W.F. Westall, the undersigned Surveyor and acting Surveyor to this Bureau, did, at the request of Flota Argentina de Navegación de Ultramar, Owners, attend the steel screw steamer "PARANA", of Buenos Aires, Argentina, 3375 gross tons, while vessel lay afloat in the port of Mar del Plata on the 5th. day of December, 1952 and on subsequent dates, and while vessel lay afloat in the port of Buenos Aires, on the 15th. day of April, 1953, and subsequent date, relative to condition of boilers, and report as follows:

Upon the first visit to the vessel, examination disclosed that the outboard, centre and inboard furnaces of the Starboard Boiler had sagged and had broken the welded attachment of previously installed reinforcing rings.

The deformation of the outboard furnace was in way of the 2nd., 3rd. and 4th. corrugations and was approximately $3\frac{1}{2}$ " at the lowest point. The deformation in the center furnace was in way of 2nd, 3rd. and 4th. corrugations and was approximately $\frac{1}{2}$ " at the lowest point. The deformation of the inboard furnace was in way of the 7th, 8th, and 9th. corrugations and was approximately $1\frac{1}{2}$ " at the lowest point.

Considerable scale was present on the water-side of these furnaces. It was then recommended that the furnaces be thoroughly scaled, pumped back into original form and reinforcing rings be welded into place to suit conditions.

The above recommendations were carried out and reinforcing rings were fitted in way of the No. 4 and 7 corrugations of the outboard furnace and in way of the No. 5 and 8 corrugations of the centre furnace, and in way of the No. 4 and 7 corrugations of the inboard furnace.

Subsequently, it was determined that all the furnaces of the Port Boiler had also sagged and had broken the welded attachment of the previously installed reinforcing rings. The deformation in the outboard furnace was in way of the 3rd, 4th, 5th. and 6th. corrugations and was approximately $1\frac{1}{2}$ " at the lowest point. The deformation in the center furnace was in way of the 7th., 8th., and 9th. corrugations and was approximately $7/16$ " at the lowest point. The deformation in the inboard furnace was in way of the 2nd, 3rd, 4th, and 5th. corrugations and was approximately $13/4$ " at the lowest point.

It was recommended that these furnaces also be pumped back to original form and that reinforcing rings be fitted into place by welding to suit conditions.

The above recommendations were carried out and reinforcing rings were fitted in way of the No. 4 and 7 corrugations of the outboard furnace and in way of the No. 5 and 8 corrugations of the center furnace and in way of the No. 4 and 7 corrugations of the inboard furnace.

The Prefectura Nacional Maritima decreed that the pressure of both of these boilers be reduced to the Working Pressure of 150 P.S.I.

Numerous stays, stay tubes and plain tubes were found to be leaking in both boilers. These defects were dealt with by rolling, caulking and/or welding and making tight.

Upon completion of all of the above work, both boilers were subjected to a hydro-test of 225 P.S.I. with satisfactory results and the furnaces were trammed while under this pressure and no change in the circularity was noted.

7. The safety-valves were set and sealed by the Argentine Government representative at 140 P.S.I. at the Owners' request.

8. The safety-valves were floated by steam with satisfactory results.

The Undersigned considers this vessel to be in a seaworthy condition and eligible to retain her class with this Bureau.

Signed T. M. Kelpien
Surveyor

Signed W. F. Westall
Acting Surveyor.