

## Corrosion in vessels built of Special Quality Steel.

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A report has recently been received from the Shanghai Surveyor on the Single Screw Steamer "CITY OF CANBERRA", stating that the shell plating, rudder mainpiece and rudder plating below the waterline were found to shew signs of excessive corrosion, this corrosion being in patches and in a considerable number of places.

The Classing Committee at their Meeting on the 29th October requested that a special report be furnished to them.

With a view to obtaining the information required the reports on all the vessels constructed wholly or partly with Special Quality Steel, classed with this Society, have been examined.

These vessels number seven and are as follows:-

<u>Name</u>	<u>Dimensions.</u>	<u>Builders</u>	<u>Owners</u>	<u>Date of build.</u>
PROMETHEUS	425x54.5x32.75	Scott & Co.	A. Holt & Co.	1925-10
EURYBATES	ditto	ditto	ditto	1928-4
CITY OF BATH	393x52x30.66	W.Gray & Co.	Ellerman lines	1926-6
CITY OF WORCESTER	296x53.2x31.3	Earles S.B.Co.	ditto	1927-10
CITY OF CANBERRA	453x57.5x34.5	W. Gray & Co.	ditto	1927-12
SATURNIA	599x79.5x46.5	Cantiere Triestino.	Messrs. Cosulich.	1927-9
VULCANIA	ditto	ditto		1928-12

There are no references to corrosion to any of the reports on these vessels, with the following exceptions:-  
"PROMETHEUS", Built 1925-10, London Report 90918, dated Dec. 1926.

No pitting or corrosion found except on one shell plate on the starboard bow and one keel plate amidships. At these places local pitting over an area about one foot square in each case was found, but this was not of a serious nature and might easily have been an original surface defect in the plate.



Glasgow Report No.92,742, May 1928.

Specially examined by Dr. Montgomerie who reported that no signs of corrosion, either of the plates or rivets could be seen.

"CITY OF WORCESTER", Built 1927-10. Ligerpool Report No.94212  
Dated August 1928.

Surface defects were observed on six plates on port side and two plates on starboard on the bridge deck and also on one shell plate.

Defects chiselled out and a careful examination made when defects appeared to be of a superficial character.

It may thus be said that with the exception of the case now under consideration, no <sup>material</sup> evidence of corrosion has been found in vessels built of Special Quality Steel.

The vessel referred to by the Classing Committee, the "CITY OF CANBERRA", 453 x 57.5 x 34.5 ft., was built by Messrs. Wm. Gray & Co. in 1927-12 mo., and is classed 100A1 with the notation "Special Quality Steel".

Special Quality Steel was used in the following parts of the vessel:-

All shell plating.

Upper Deck stringer and continuous plating.

Second deck continuous plating but not stringer.

Double bottom - Floors and Brackets.  
Centre and side girders.  
Inner bottom plating.

The vessel subsequently came under survey at Manchester in June 1928, and at Newcastle in December 1928, but no reference is made to corrosion in these reports.

The Shanghai Report, dated September 1929, states that:-

"The shell plating, rudder mainpiece, and rudder plating below the waterline were found to shew signs of excessive corrosion, this corrosion being in patches and in



a considerable number of places. The affected parts have now been carefully scraped, cleaned, and afterwards given a special coat of anti-corrosive paint."

As there does not appear to be any particular reason for the corrosion now reported, it is submitted further experience as regards corrosion in vessels built of Special Quality Steel be awaited.

It is further submitted that in view of the Shanghai report, the vessel should be specially examined at the next dry docking in this Country, and the Owners should be requested to state when this will take place.

4.11.29.

*A list is appended showing the extent of special quality steel used in these vessels.*



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