

INDUSTRIAL GALVANIZERS CORPORATION PTY. LTD.

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21 September 2006

Keith McComaskey
Managing Director
Facade Retaining Systems Pty Ltd
Unit 6, 723 The Horsley Drive
SMITHFIELD
NSW 2164

Re: Durability of galvanized steel components for Facade Retaining Systems

Dear Keith,

In response to your inquiry requesting commentary on the expected durability of the steel components used in your company's retaining wall systems, please note the following.

The RHS posts are nominated as 3 mm thick, and the mesh used is nominated as 6 mm thick.

These components are hot dip galvanized. The Australian Standard for items galvanized after fabrication is AS/NZS 4680:1999.

All hot dip galvanized products supplied through an ISO 9001 accredited galvanizing company are required to comply with this standard.

The minimum coating mass/coating thickness specified in this standard are listed in the following table.

REQUIREMENTS FOR COATING THICKNESS AND MASS FOR ARTICLES THAT ARE NOT CENTRIFUGED

Article thickness mm	Local coating thickness minimum µm	Average coating thickness minimum µm	Average coating mass minimum g/m ²
<1.5	35	45	320
>1.5 <3	45	55	390
>3 <6	55	70	500
>6	70	85	600

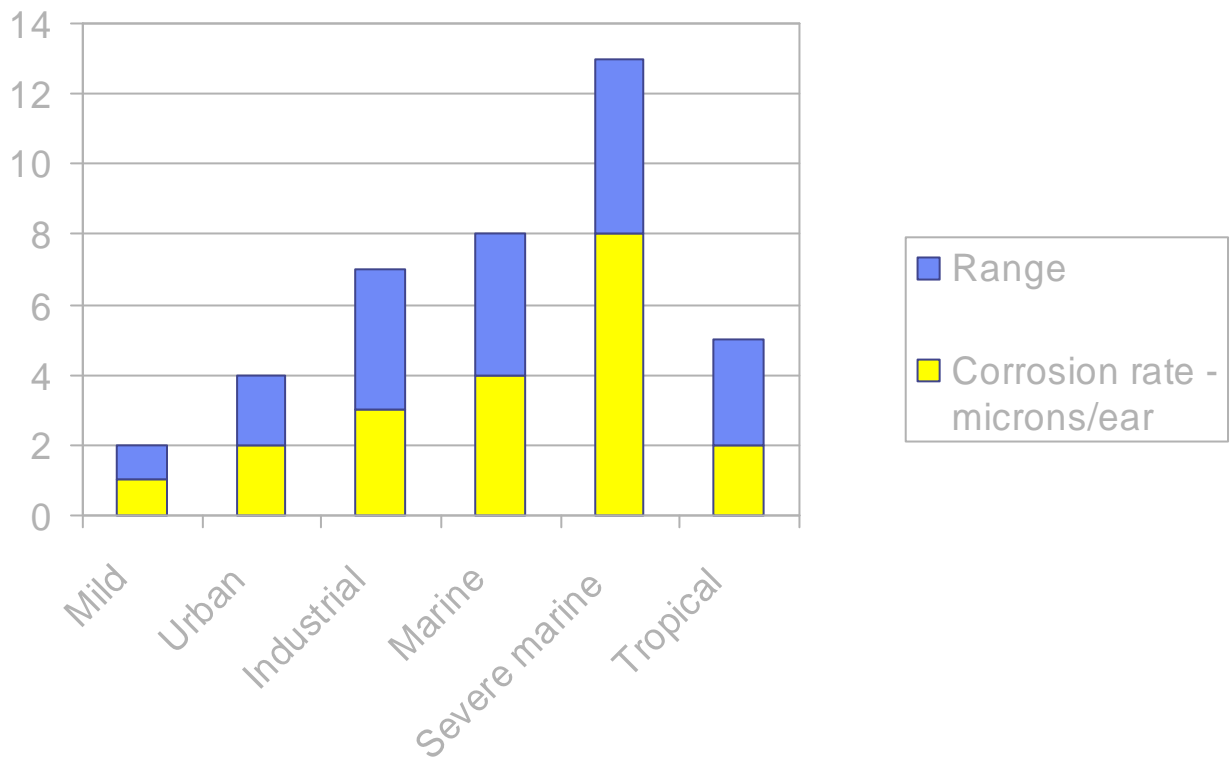
The minimum galvanized coating thickness on the RHS posts should thus be approximately 60 microns and the minimum galvanized coating thickness on the mesh should be approximately 80 microns.

In practice, because of the nature of the hot dip galvanizing process and the variations in steel surface condition and chemistry, the actual coating thicknesses achieved will generally exceed those nominated in the standard.

GALVANIZED COATING DURABILITY

The coating life of a hot dip galvanize coating is a function of the environment to which it exposed and its coating thickness.

The chart below shows the typical range of corrosion rates for zinc (galvanized) coatings in various environments. Galvanized coating life can be estimated by dividing the coating thickness in microns by the average annual corrosion rate in microns/year.



In most Australian urban areas that are not subject to the influence of ocean surf, typical annual corrosion rates are in the order of 1-2 microns per year, where the structures are reasonably well drained and ventilated, and in the order of 2-4 microns per year in less well ventilated structures where the time of wetness due to condensation or precipitation is longer than that for open structures.

SUMMARY

In typical urban/metropolitan environments, hot dip galvanized steel elements of the Facade Retaining Systems products can be expected to have a maintenance-free service life in the order of 15-25 years for the above ground section of the posts and 20-35 years for the mesh. This is conditional on the galvanized coating complying with the Australian Standard AS/NZS 4680:1999 and that the steel components remain in normal atmospheric exposure conditions.

Yours sincerely

John Robinson
Industrial Galvanizers Consulting Services