

21. HOT-DIP GALVANIZED COATING GUARANTEES

INTRODUCTION

Asset owners are becoming increasingly aware of the need to prolong the maintenance-free life of their buildings, plant and equipment. This has led to their project managers passing responsibility for materials performance on the suppliers, over and above what would be considered normal warranty periods.

With protective coatings, in particular, there has been an increasing demand for long-term guarantees on the coating's performance. This is driven by the financial imperative that building (coating) maintenance adds no value, particularly on manufacturing or infrastructure projects.

For this reason, Industrial Galvanizers Australian Galvanizing Division has developed a Coating Guarantee program that provides a simple and sustainable performance guarantee of hot-dip galvanized coating performance on specific projects.

HOW THE IGAG COATING GUARANTEE WORKS

There is no practical upper limit on the term of an Industrial Galvanizers Coating Guarantee. While 10-25 years is the most common coating guarantee range nominated by project managers, guarantee periods of 50 years or more can be supported on specific projects given the location and environmental conditions to which the hot-dip galvanized coating will be exposed.

Once a client has expressed interest in having an Industrial Galvanizers Coating Guarantee raised on a project, the location and operating conditions to which the hot-dip galvanized coating is to be exposed are subject to review by Industrial Galvanizers staff. This includes the preparation of an Environmental Evaluation Report (EER) and may also include a site audit, depending on the scope of the project..

This information is forwarded to Industrial Galvanizers' Consulting Services section for review and detailed analysis. This analysis includes reference to the IGAG Corrosion Mapping System to determine regional rates of corrosion for hot-dip galvanized coatings, followed by detailed topographical analysis based on local Geosciences Australia maps.

This analysis allows topographical features such as height above sea level, prevailing wind direction, classification of locality (urban, rural, industrial, marine,,,) and other factors that will influence the durability of hot-dip galvanized coatings.

This analysis allows approximate corrosion rate to be established for hot-dip galvanized coatings. This corrosion rate can then be applied to the hot-dip galvanized coating, based on the coating thickness that will result from the hot-dipping of the sections involved in the project.

The coating thickness may vary from section to section, based in steel chemistry, method of manufacture and steel section thickness. This outcome can be predicted with a high degree of accuracy based on Industrial Galvanizers experience in processing over 100,000 tonnes of fabricated steel annually.

By combining the calculated rate of corrosion with the minimum average galvanized coating thickness of the project steelwork, a Coating Guarantee period can be established that becomes the



Industrial Galvanizers offers formal coating guarantees on major projects, such as this 25 year guarantee on the galvanized coatings use on the Brick Pit Ring project at Homebush Bay, for the Sydney Olympic park Authority.

offer to the client.

On negotiated acceptance of the Coating Guarantee offer in principle, the formal documentation is generated and forwarded to Industrial Galvanizers Head Office for Board Approval. This level of authorization is required as any Coating Guarantees are committing the company to future risk, that needs to be managed in the interests of its shareholders. It is also a reflection of the contract obligations that the company has entered into with its customers.

Following Board approval, copies of the Coating Guarantee are signed and forwarded to the client for acceptance and signing, to finalise the arrangement. The issuing of the Coating Guarantee is acknowledged by the presentation of a Coating Guarantee Certificate to the client.



The galvanized steelwork supplied by Industrial Galvanizers to the M5 East Motorway project for the NSW Roads and Traffic Authority in 2003 has a 25 year coating guarantee

EXCLUSIONS

IGAG Coating Guarantees contain some exclusions to accommodate conditions that may affect the durability of the hot-dip galvanized coating that are outside the parameters determining the normal service life of the coating.

These logical exclusions include exposure to corrosive chemicals, mechanical damage, electrochemical corrosion through contact with incompatible materials and prolonged contact with housekeeping issues that are the responsibility of the operator.

CLIENT OBLIGATIONS

It is essential that clients who wish to avail themselves of an IGAG Guarantee advise Industrial Galvanizers of the requirement for a galvanized coating guarantee prior to the project's commencement.

It is contrary to the strict protocols associated with the provision of these legally binding warranties to provide galvanized coating guarantees retrospectively and in other than exceptional circumstances, no IGAG Coating Guarantee will be issued on a project that has already been processed by Industrial Galvanizers.

In addition, it is not Industrial Galvanizers policy to issue coating guarantees on small quantities of steelwork because of the costs involved in the processing and administration of individual Coating Guarantees.

SUMMARY

Since the commencement of the Industrial Galvanizers Coating Guarantee program, a large number of project-specific guarantees have been issued. These have ranged from less than 10 years (at the client's nomination) to 50 years on a number of infrastructure projects.

The availability of these Industrial Galvanizers Coating Guarantees, backed by a major public company, ensures recipients that no coating maintenance costs will be incurred during the guarantee period, given compliance with the terms and conditions of the Coating Guarantee documents.



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01 - SPECIFIERS MANUAL — THIRD EDITION

Industrial Galvanizers Australian Galvanizing Division (IGAG) operates nine galvanizing plants around Australia, ranging in size from large structural galvanizing facilities to specialised small plants designed to process small parts.

The Australian Galvanizing Division has galvanized in excess of 2 million tonnes of steel products in Australia since its first plant was commissioned in 1965 and is recognized for its ability to handle complex and difficult projects, as well as routine contracts.

This experience has been collated in the Specifiers Design Manual, to assist those involved in the design of steel products and projects to better understanding the galvanizing process and allow the most durable and cost-effective solutions to be delivered to these products and projects. All sections of this Third Edition have been completely updated and additional sections have been included to provide additional technical information related to the use of hot dip galvanized steel.

In addition to its Australian Galvanizing operations, Industrial Galvanizers Corporation has a network of manufacturing operations in Australia, as well as galvanizing and manufacturing businesses throughout Asia and in the USA.

The company's staff in all these locations will be pleased to assist with advice on design and performance of hot dip galvanized coatings and products. Contact details for each of these locations are located elsewhere in this manual.

This edition of the Industrial Galvanizers Specifiers Manual has been produced in both html and .pdf formats for ease of access and distribution and all documents in the Manual are in .pdf format and can be printed if paper documents are required.

The Specifiers Manual is also accessible in its entirety on the company's web site at www.ingal.com.au.

Additional copies of the Specifiers Manual are available on CD on request.

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