

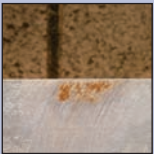
GALVANeyes

Issue 27

This issue



Case Study –
Woodpecker



Technical Bit



Employee
Focus



Competition
Time



Hereford
Galvanizers



Shropshire
Galvanizers

www.galvanizers.co.uk

Zn V SO²

Hot dip galvanizing creates a barrier between your precious steel and the nasty old atmosphere. It protects your work from corrosion and extends its life by many years. That is all well and good but by how many years? I hear you ask. It may surprise you that the speed that zinc corrodes is partly determined by your location.

Research has been carried out by ADAS Consulting (Agricultural Development Advisory Service) in conjunction with the Galvanizers Association throughout the UK to determine the levels of atmospheric sulphur dioxide (SO²), the most important contaminant for zinc. This data has been used to create the annual average corrosion rates for zinc for each 10km x 10km square grid of the UK. This comprehensive study was last carried out in 2000 and led to the creation of The Zinc Millennium Map.

The map is simple to use, colour-coded with darker blue colours indicating higher levels of corrosion than lighter ones. E.g. Bristol has an average corrosion rate of 1µm/year (i.e. a zinc coating of 85 microns will last for 85 years).

The Zinc Millennium Map is the third map to show zinc corrosion rates, the first being published in 1982. The levels of SO² in the atmosphere have been falling for decades and although the emissions have levelled off



*David Watkins,
Managing Director*

recently it is still likely that ten years on, The Zinc Millennium Map data can be considered conservative. Therefore galvanized steel is likely to last even longer than is implied on the map.



It should be noted that the map is to be used as a guide only and the rates of corrosion are most relevant to stationary, exterior galvanized steelwork. There will be localised factors specific to a certain site or particular steelwork that may also affect the corrosion rate of a zinc coating.

Please contact us for a copy of the Zinc Millennium Map.

Enjoy GALVANeyes.



Woodpecker

Forty years is a long time for a steel sculpture but not one that has been hot dip galvanized.

Cast your mind back to July 1969. At the same time that man first walked on the moon, cider producer Bulmers and ornithologist Sir Peter Scott unveiled a new sculpture on Whitecross Road, Hereford. The Bulmers Woodpecker.

Bulmers commissioned local sculptor Walenty Pytel, internationally renowned for his metal bird sculptures, to design and create the piece to celebrate their Woodpecker cider brand. The 600kg and twenty foot high steel sculpture was hot dip galvanized to protect it from corrosion and then painted black for aesthetics.

Forty years on, and despite a few paint jobs over the years, the paint had continued to peel away and the old bird was beginning to look a bit ruffled. As a result of this Bulmers decided that the Woodpecker could do with a complete makeover and contacted Hereford Galvanizers Ltd to make the arrangements. Hereford Galvanizers had originally galvanized the sculpture back in 1969 and were only too keen to help. Their first job was to inspect the



Removing the flaking paint by sand blasting

sculpture and after carrying out some tests discovered that the galvanized zinc coating beneath the peeling paintwork was still sound and would have carried on protecting the steel from corrosion for many years to come.

The steelwork was first removed from its plinth by local crane company Jay and Davies and taken to



Woodpecker rising from the zinc (note: no ashes)

another local company CSCS to be shotblasted free of the existing flaky paintwork. The steelwork was then hot dip galvanized by Hereford Galvanizers and returned back to CSCS for its paint job before finally being lifted back onto its plinth with Walenty Pytel himself as one of the onlookers.

Harry Turner, Cider Communications Manager for Bulmers, said "The Woodpecker is an iconic and much loved landmark in the Whitecross Road area, where Fred and Percy Bulmer first set up a cider mill over 120 years ago. However, it has been showing its age recently and we thought it was time to give the old bird a bit of a treat, to make sure it's still welcoming visitors to Hereford in another 40 years."





Bill Warren
Quality Control Inspector
Hereford Galvanizers

Technical bit

We all make mistakes. That's life. A small 'chip' in a galvanized coating isn't the end of the world. The coating itself will protect small areas of damage. Repairing larger damage can be done quickly and easily with your steelwork still protected for years and conforming to British Standards.



Mike Jones
Production Supervisor
Shropshire Galvanizers

Renovating damaged areas

A galvanized coating may be damaged by operations such as cutting, welding or drilling after galvanizing. Also, although a galvanized coating is far more robust than other corrosion protection systems such as paint, small areas of damage may still occur during transport and erection.

Small areas of damage such as scratches (typically up to about 5mm wide) may self-heal and have little effect on the life of the coating due to the sacrificial action of zinc. Zinc corrodes in preference to steel leaving a deposit on the steel resealing it from the atmosphere and therefore helping prevent corrosion. Nevertheless, it is often aesthetically desirable to renew the coating over large or small areas in line with the requirements of BS EN ISO 1461:2009 which highlights the three repair techniques (see right)...



Zinc rich paint used on damaged galvanized coating – before and after

Zinc rich paints/pastes

Thoroughly clean the damaged area to remove any rust and surface contaminants. Sufficient coats of a suitable zinc rich paint/paste should then be applied in order to achieve the required renovated coating thickness. It is important that the paint/paste is allowed to dry before applying subsequent coats.

Low melting point zinc sticks

Thoroughly clean the damaged area to remove any rust and surface contaminants before being preheated with a blowtorch to about 300°C. The alloy stick, when applied to the steelwork, will melt to form a coating.

Zinc flame spraying

Mask the damaged area and grit blast to Sa3 with angular iron grit. Specialist equipment may then be used to spray a zinc coating on to the area for renovation. It is normally necessary to seal the spray coating afterwards.



ZINCO SPRAY

High performance Zinc spray

ON SALE NOW

Contact us to order
or for more information

Hereford 01432 267664

zinc@hereford.galvanizers.co.uk

Shropshire 01691 670757

zinc@shropshire-galvanizers.co.uk

Summary

The zinc rich paint is the easiest and the most commonly used form of renovation. Whilst zinc sticks provide a good repair with a bright finish, problems may be encountered when trying to achieve the required coating thickness on vertical surfaces. Zinc flame spraying is the best means of repair but it is the hardest to conduct and requires specialist equipment. Where colour match is required a flame spray renovation may be over-coated with zinc-rich paint.

Employee focus



Behind the glasses is a familiar face to Shropshire Galvanizers' customers. Nigel Smith, our Sales Engineer, has been roaming the land for the last 12 years in his quest to make black steel shinier.

Nigel has been married to Linda for 21 years and lives near Shrewsbury. Hobbies include going to the gym, canoeing and hiking.

- Name:** Nigel Smith
Title: Sales Engineer
Started: October 1998
Likes: Vicky Archer, Radio Shropshire (don't tell Linda)
Dislikes: Litter

Congratulations to Terry Howarth of Southcon who correctly answered '50 years' to the Weston Pier design life question from the previous edition of GALVANeyes. Terry's name was randomly drawn from a random hat by our MD David Watkins to win an iPod Nano (whatever one of those is).



Hereford Galvanizers Ltd
 Westfields Trading Estate
 Hereford HR4 9NS
 T 01432 267664
 F 01432 352735
 zinc@hereford.galvanizers.co.uk



Shropshire Galvanizers
 Units 12 & 13, Maes-y-Clawdd,
 Maesbury Road Ind Est, Oswestry,
 Shropshire SY10 8NN
 T 01691 670757
 F 01691 670636
 zinc@shropshire-galvanizers.co.uk

Competition time...

A big thank you to all those who took part in the competition in the previous edition of GALVANeyes. Here is another opportunity to win. This time the prize is £100 worth of Marks and Spencer gift vouchers. All you need to do is answer the following question...

What year was Bulmers woodpecker sculpture first galvanized?

Please answer and complete your contact details below and post, fax or email this page back to Hereford Galvanizers (for contact details see top right of page) by 17th December 2010 to enter the draw.

Name: Company:

Address:

Post code:

Tel: Fax:

Email:

The first correct answer drawn from a hat by our Managing Director, Dave Watkins, will win. The winner will be announced in the next edition of GALVANeyes. Good luck.

