GALVANIZING: A SUSTAINABLE FINISH FOR THE RAIL SECTOR

Excellence in Galvanizing

WEDGE

GALVANIZING: A SUSTAINABLE FINISH FOR THE RAIL SECTOR

As one of the most commonly used materials within the rail sector, steel is both durable and versatile - with applications ranging from platforms and stations to access equipment and overhead signalling systems. As the industry continues to work on reducing its carbon footprint and meet ever-growing customer expectations, protecting the steel from corrosion and ensuring it can withstand harsh weather conditions is paramount.

Why is it so sustainable?

Unlike other finishes or protective coatings, the process results in minimal waste, with any zinc that doesn't instantly form a coating on the metal remaining in the galvanizing bath before being re-used.

Zinc's non-ferrous properties enable it to be recycled again and again without any loss of its physical or chemical properties.

Where galvanizing really comes into its own as a sustainable finish is its one-off nature – the process only needs to be carried out at the beginning of any construction project, but results in corrosion protection that can last up to 70 years depending on the environment it is used, without the need for any time or resource-intensive maintenance and replacement.

Not only does galvanizing lengthen the lifespan of steel by protecting it against rust and corrosion for many decades, but it's extremely energy-efficient throughout its production and whole lifecycle. The process uses resources considerately to ensure a relatively low environmental burden, and galvanized steel can easily be recycled with steel scrap or re-galvanized, removed, and reused elsewhere.

GALVANIZING AND THE CIRCULAR ECONOMY

WHY CHOOSE GALVANIZING?

Sustainability is becoming a significant consideration when choosing materials to ensure that buildings are as sustainable as possible.

Galvanizing has long been seen as the most environmentally-friendly finishing process available to prevent corrosion, as it is highly sustainable and produces minimal waste.

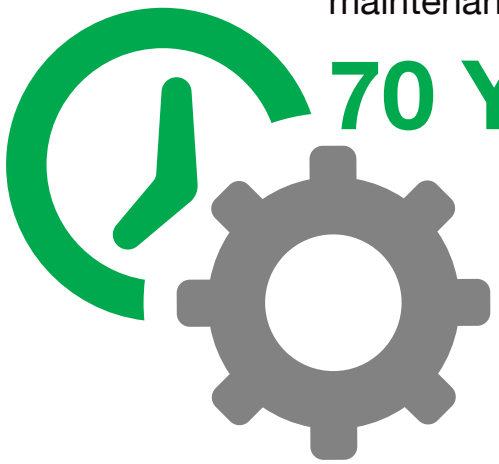
What is Galvanizing?

Hot Dip Galvanizing is a process developed to prevent steel from corroding and sees the metal immersed in a bath of molten zinc at a temperature of around 450 °C. During the process, a metallurgical bonded coating is formed which protects the steel from rust and corrosion.

How does it work?

Before the process can take place, the steel goes through a thorough chemical clean to remove all rust, oil and mill scale from the surface. When the cleaning process has been completed and the cleaning solution has been rinsed off, the coating process can begin. The steel is then fluxed and dipped into a bath of molten zinc that has been heated to around 450 °C (860 °F). The galvanized steel is then removed from the bath and left to cool.

Galvanizing steel can provide a maintenance free life of up to

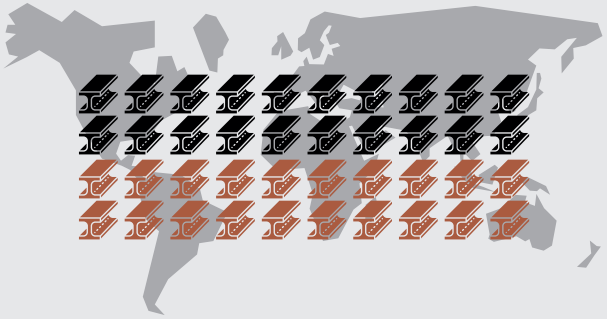


70 YEARS!

Up to **4%** of the world's GDP is lost through corrosion each year

MAIN BENEFITS OF GALVANIZING

- **Long life** - Galvanizing creates an easy-to-clean surface which can give a maintenance-free life of more than 70 years (depending on the environment it is being used in).
- When maintenance eventually becomes necessary, it is straightforward. No complex preparation treatments are necessary.
- **Lowest lifetime cost** - Low initial cost and long life make galvanizing the most versatile and economic way of protecting steel for long periods.
- The benefits of no maintenance or extended maintenance intervals, include fewer problems of access in remote areas, difficult terrain, when buildings are closely packed together or when there are safety restrictions such as electricity pylons.
- **Coating toughness** - Galvanizing is unique. The hot dip process produces a coating which is bonded metallurgically to the steel. No other coating process has this feature and, as a result, galvanized steel has by far the greatest resistance to mechanical damage during handling, storage, transport and construction - an important factor where steelwork is to be shipped around the world.
- **Complete coverage** - Because it is formed by dipping steel into molten zinc, all parts of the surface of the steel are coated - inside, outside, awkward corners and narrow gaps which would be impossible to protect in any other way.
- The coating actually tends to build up at vital corners and edges - rather than thinning out as is often the case with brushed, sprayed and other dipped coatings.



Every 90 seconds across the world **ONE TONNE** of steel turns to rust, so for every two tonnes of steel produced one is to directly replace rust

CONTACT YOUR LOCAL PLANT

ACROW GALVANIZING
14 Piperell Way, Haverhill,
Suffolk, CB9 8PH
01799 522219
acrow@wggltd.co.uk
Bath size 5m x 1.1m x 3.2m

B.E. WEDGE
Stafford Street, Willenhall,
West Midlands, WV13 1RZ
01902 600713
wedge@wggltd.co.uk
Bath size 7.62m x 1.22m x 2m

EAST ANGLIAN GALVANIZING
Old North Road, Sawtry,
Cambridgeshire, PE28 5XN
01487 833160
east.anglian@wggltd.co.uk
Bath size 8m x 1.3m x. 3.1m

EDWARD HOWELL GALVANIZERS
Watery Lane, Wednesfield,
West Midlands, WV13 3SU
01902 637463
edward.howell@wggltd.co.uk
Bath size 10m x 1m x 2.4m & 4m x 1.3m x 3m

HUMBER GALVANIZING
Unit J, Citadel Trading Park, Citadel Way,
Hull, HU9 1TQ
01482 322466
humber@wggltd.co.uk
Bath size 7.5m x 1.05m x 2.4m

MANCHESTER GALVANIZING
Green Lane, Heywood,
Lancashire, OL10 2DY
01706 366191
manchester@wggltd.co.uk
Bath size 10m x 1.4m x 2.9m

MERSEYSIDE GALVANIZING
Blackburne Street, Garston,
Merseyside, L19 8JA
0151 4271449
merseyside@wggltd.co.uk
Bath size 6.2m x 1m x 2.4m

METALTREAT GALVANIZERS
Metaltreat House, Canal Road, Bradford,
West Yorkshire, BD2 1AN
01274 221500
metaltreat@wggltd.co.uk
Bath size 6m x 1.1m x 2.5m

NEWPORT GALVANIZERS
Llanwern Works, Newport,
Gwent, NP19 4QX
01633 277400
newport@wggltd.co.uk
Bath size 6.8m x 1.1m x 3.5m

SCOTTISH GALVANIZERS
Maclellan Street,
Glasgow, G41 1RR
0141 4273041
scottish@wggltd.co.uk
Bath size 14.2m x 1m x 2.9m

SOUTH EAST GALVANIZERS
Crittall Road, Witham,
Essex, CM8 3DR
01376 501501
south.east@wggltd.co.uk
Bath size 10m x 1.5m x 2.9m

SOUTH WEST GALVANIZERS
Marsh End, Lords Meadow Industrial Estate,
Crediton, Devon, EX17 1DN
01363 774574
south.west@wggltd.co.uk
Bath size 10m x 1m x 2.1m

WESSEX GALVANIZERS
Tower Industrial Estate, Tower Lane, Eastleigh,
Hampshire, SO50 6NZ
02380 629952
wessex@wggltd.co.uk
Bath size 7m x 1m x 2.7m

WORKSOP GALVANIZING
Claylands Avenue, Worksop,
Nottinghamshire, S81 7BQ
01909 486384
worksop@wggltd.co.uk
Bath size 20.5m x 1.32m x 2.4m

Excellence **in Galvanizing**

WEDGE

RISQS approved, Wedge Group Galvanizing is the UK's largest galvanizing organisation. With 14 plants across the UK we offer a national service, processing steel from a 1.5mm washer to 29m beam. Our plants are designed and equipped to set industry-leading standards for sustainability and low environmental impact.

- ✔ RISQS Verified & Audited
- ✔ Free Technical Advice & Presentations
- ✔ Galvanize 1.5mm to 29m Long
- ✔ Unrivalled Customer Service
- ✔ Collection & Delivery
- ✔ Spin Galvanizing

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