

INTERGALVA Journal

The magazine of the world's premier event for the galvanizing industry | Issue 2 Summer 2018

INSIDE
Guide to
Exhibitors



▪ Sustainable Excellence in Zinc Recycling ▪

Zinc skimmings ▪ Zinc sheets ▪ Bottom dross
Secondary Zinc metal ▪ Zinc alloys



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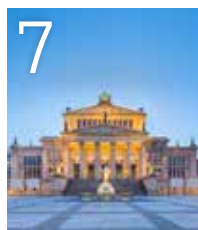
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Stand by stand, all the exhibitors at Intergalva 2018

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Welcome



Welcome to Intergalva! It is with immense pride that the European galvanizing industry operates the Intergalva series of events every 3 years. To bring the worldwide industry together – to share our knowledge and our experiences – is a responsibility that we take very seriously. It is wonderful to see that, in conjunction with the German industry, we have succeeded to bring everyone together in ever increasing numbers.

This is the second edition of the Intergalva Journal that was launched at Intergalva 2015 in Liverpool. The magazine includes items of interest around the event, news and editorial sections provided by our main sponsors and...the Guide to Exhibitors which you will find in the centre section.



The Intergalva exhibition has continued to build in importance to the worldwide galvanizing industry. The number and

breadth of exhibiting companies has reached new heights for Intergalva 2018. We hope that delegates will take time to carefully plan the 3 event days to be sure to visit all of them.

Don't forget that all the exhibitors and their details can be found in the Intergalva mobile App which is available to all delegates and exhibitors. The App even provides a useful map with links to the location of each exhibitor!

I would like to take this opportunity to thank the staff of the European General Galvanizers Association and the staff of the Industrieverband Feuerverzinken for their dedication and hard work over the past 3 years to deliver this biggest Intergalva ever.

Martin Kopf
President – European General Galvanizers Association

 www.egga.com
 www.intergalva.com

Cover photo Courtesy of The Coatinc Company.
Photo: Janosch Gruschczyk

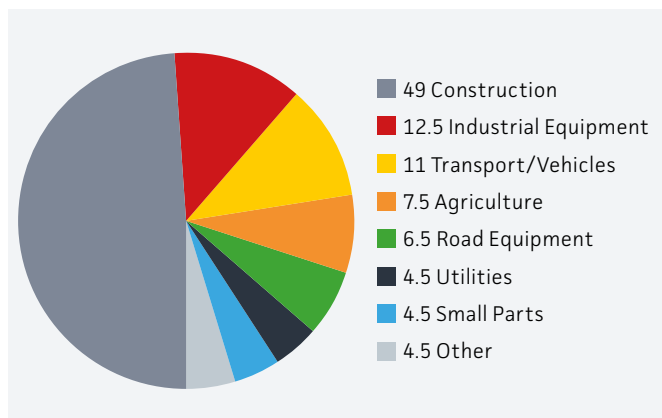
The galvanizing industry in Germany

In 2017, around 1.9 million tonnes of steel were batch galvanized in Germany. About 80 percent of that volume is done by sub-contact 'jobbing' galvanizing. There are about 147 galvanizing plants in Germany - with a total kettle volume of 5500 cubic meters. The industry employs approximately 4800 employees and has a turnover of around 760 million euros. For those people interested in zinc demand, 110,000 tonnes of zinc were used in 2017 by the German batch galvanizing industry.

Batch galvanizing plants in Germany are, from a technical point of view, at a very high level. Technologies for reducing, purifying, recycling and recirculating air, water, waste and heat have long been the standard in Germany.

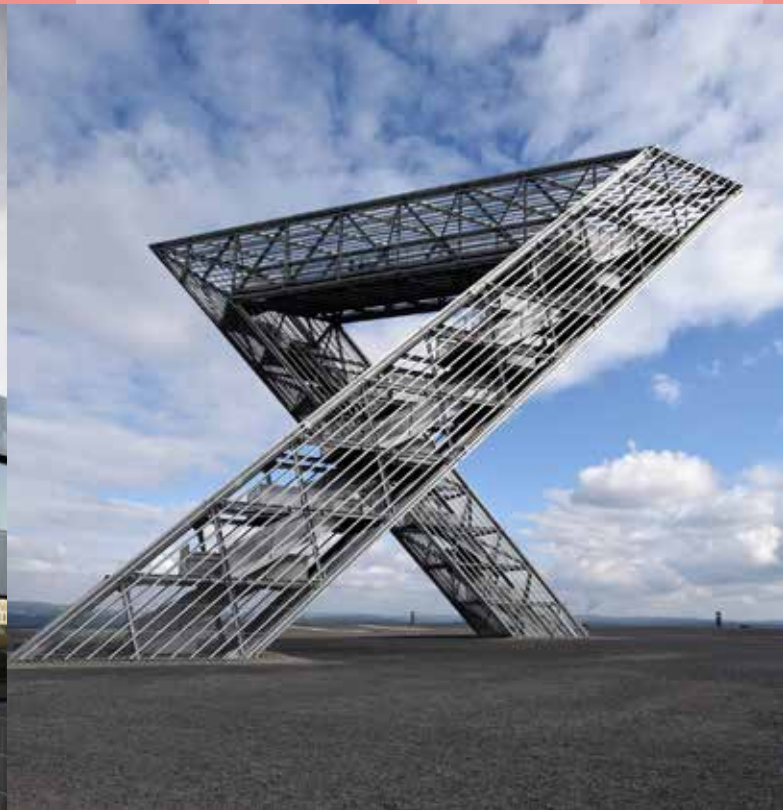
The German galvanizing industry has always been at the forefront of galvanizing technology *Bottom right: Galvanized highway bridge over the A44, Germany*

The largest batch galvanizing plants in Germany have kettles with a length of 19.5 m. The wide variety of sizes and locations of galvanizing kettles serves a very diverse range of customers that is dominated by the construction sector. The market segments of the German galvanizing industry in terms of galvanized tonnage (%) are shown below:



Typical products of the German batch galvanizing industry include highway safety barriers balcony railings, stairways, car trailers, truck semi-trailers, steel constructions, modern steel and glass architecture and parking garages. In recent years, innovative architectural applications such as use of batch galvanized plates for facades have contributed to some interesting new applications for the industry. Other new initiatives are aimed at expanding the use of batch galvanizing for highway bridges.





Industrieverband Feuerverzinken e.V. and its associated organizations

The Industrieverband Feuerverzinken e.V. (IFV) is based in Düsseldorf and is the galvanizers association that represents the German batch galvanizing plants and its supporting members. The association and its service organization, the Institut Feuerverzinken GmbH, represent the economic and technical interests of the German hot dip galvanizing industry to the public, politicians, authorities, process users, consumers and scientific institutions. The duties of the organisations include:

- Lobbying
- Research and Development
- Members Support
- Public relations and process marketing
- Technical support for users
- Training for members and process users
- Standardization
- Representation of the industry within EGGA and other associations.

The association was founded in 1958, so has its 60th anniversary in 2018. Today, the association has 107 members.

The Institut Feuerverzinken GmbH, as subsidiary and service organization of the industry association is active for the hot dip galvanizing industry in the areas of marketing and technology. The Gemeinschaftsausschuss Verzinken (GAV) is the

New initiatives by the association are driving innovative architectural uses of batch galvanizing **Top right: The Saar-Polygon: A monument for the Saar mining region designed by the Berlin architects Pfeiffer Sachse**

research organisation of German galvanizing industry. The main task of GAV is organizing and coordinating joint research in the product, process and application technology for hot dip galvanizing. This is done in cooperation with leading universities in Germany.

Offer for galvanizers from outside of Germany: Become an Official Partner

It is now possible galvanizers from outside Germany to become an Official Partner of the Institut Feuerverzinken. Official Partners can benefit from a wide range of services:

- Exclusive specialist information on galvanizing
- Use of our advertising material on galvanizing
- Participation in assemblies and events
- Participation in seminars/workshops on galvanizing topics
- Professional advice on technical/business topics
- In-house training on technical topics
- Company presentation on the association website
- Certificate confirming the official partnership

📍 Visit Institut Feuerverzinken in the Foyer or visit www.feuververzinken.com

The new symbol for batch galvanizing

After extensive discussions within the EGGA Marketing Committee, a common symbol for batch galvanizing has been established. These discussions started in response to the age-old problem of other coatings 'pretending' to be a batch galvanized coating. The misuse of the word 'galvanizing' is hard to stop – so a new, more visual, approach was needed.

Many options were explored – some more innovative than others and we had many arguments along the way! Our final choice was for a simple and effective symbol that reinvents the traditional 'I-Beam' in a modern context.

There are two versions of the symbol – with and without the text 'EN ISO 1461'. The version that includes 'EN ISO 1461' is for normal use. The alternative version is for use when the text may be too small or inappropriate to the use of the symbol. In theory and by agreement, other equivalent national standards could be used with the symbol.

A 'Symbol Guidelines' and final graphics package has been issued to EGGA's National Associations and we are ready to share the use of the symbol with our worldwide partner associations.



The symbol is intended to distinguish batch galvanizing from other protective coatings and to provide a common generic identity within our communications. It is not intended as a 'brand' logo. Its origins lie in the past difficulties encountered through the lack of a clear identity and the confusion of technical terms and phrases to describe batch galvanizing.

Initially, it is intended that the symbol will be used by National Associations in technical/promotional literature, websites, etc. Member companies of associations may also use the symbol. Decisions on use by member companies should be taken at national level.

➡ To learn more about the symbol, visit www.egga.com or contact Kimberley Warner at EGGA

Konzerthaus Berlin – A gala evening

The Konzerthaus Berlin has a unique history. First constructed between 1818 and 1821, it is considered one of the main works of Karl Friedrich Schinkel, perhaps the most important of the European Classicistic architects. Schinkel only designed the exterior of the building we see today, however – it was reconstructed in great detail between 1979 and 1984 following its destruction in the 2nd World War. The interior, on the other hand, is a completely new construction – though its design is artfully reminiscent of Schinkel's original.

A feature of the Great Hall is the organ 'Jehmlich' – a four-manual pipe organ built by Jehmlich Orgelbau Dresden in 1984. The organ has four manuals and pedal, 74 stops and 5,811 pipes.

Intergalva delegates will enjoy the surroundings of the Konzerthaus for the Gala Dinner on evening of Tuesday 19 June.

➡ Buses depart at 18.30



An Intergalva made in Germany

The Industrieverband Feuerverzinken is 60 years old this year and we are delighted to mark our 60th anniversary as the hosts of Intergalva 2018 in Berlin.

Around 900 individual participants and 62 exhibiting companies have taken Intergalva to a new quantitative dimension and show the growing importance of this conference and exhibition in a globalized world. The international exchange between scientists and practitioners as well as the intensification of transnational contacts are a positive signal for the future development of our industry. Numerous innovations will be presented at the conference.

Some of them were initiated and promoted by the Industrieverband Feuerverzinken and its associated organizations. We are proud to present these innovations. The Intergalva exhibition has now developed into a high-profile global trade fair with an area of around 5,000 square meters and 62 exhibiting companies from the world's leading suppliers to the galvanizing industry. German suppliers are at the forefront of galvanizing technology and 24 suppliers and service companies from Germany are exhibiting at Intergalva 2018 and have played an important role as sponsors and ambassadors of Intergalva 2018.



Paul Niederstein, Speaker of the Board, Industrieverband Feuerverzinken e.v.

A new feature at Intergalva 2018 is the welcome reception and the “Verzinkerparty” within the exhibition hall. In a relaxed atmosphere delegates can get in contact with colleagues from galvanizing plants all over the world and maximise their time with the exhibitors. The gala dinner on Tuesday evening at the Berlin Konzerthaus will be a truly grand occasion at one of Berlin's premier event locations. This was only made possible by generous sponsorship of my fellow board members of the Industrieverband Feuerverzinken.

We are pleased that so many delegates have taken the option to visit our members' galvanizing plants after the conference. These

plant visits include ultra-modern new plants, recently-renovated older plants and specialist plants. German galvanizers increasingly include powder coating of hot-dip galvanized steel as part of their own service to customers – so there are many visits that include powder coating operations.

I know that you will enjoy Intergalva just as much as we are happy to have you here as our guests. Embrace the feel-good atmosphere of an Intergalva conference with exhibition and hotel under one roof. Enjoy an Intergalva made in Germany!



Key Note Speaker Intergalva 2018

Lars Thomsen is an influential futurist and trends researcher. He is the founder and CEO of Swiss-based think tank, Future Matters.

Thomsen consults for corporations, institutions and government bodies on the development of future strategies and business models. He interprets the complex world of trends to inform organisations about how to strategically plan for the future. His research focuses on the future of work and developments in energy and resources, electric mobility, corporate culture, media, as well as artificial intelligence.

KVK KOERNER offers Green Technology to the Galvanizing Industry for over 40 years

KVK KOERNER has been working in the galvanizing industry for more than 40 years. Since the beginning of their activities their goal has always been to offer products and process technology that meet the highest possible standards in quality, lifetime and environmental protection.

Green technology does not only mean environmental protection. Koerner's approach is much wider. Their philosophy is to serve the market with best available quality products, together with highest standard on process technology.

That leads to extremely long lifetime (30 years and more) for KVK tanks that have been delivered all over the world. The patented KVK plate, which is produced in-house to their high manufacturing standards, result in the world's toughest pretreatment tanks.

Environmental protection was always an important point for their products - KVK KOERNER was the first company to supply an



Transport of a KVK pickling tank

encapsulated pretreatment line more than 20 years ago. The special design of that type of plants including scrubber technology is known today as the KVK SYSTEM which has the highest efficiency in terms of process technology together with maximum energy saving as its mission. For over 20 years KVK KOERNER has supplied the KVK system worldwide.



Encapsulated pretreatment according the KVK KOERNER System



An encapsulated pretreatment system guarantees that acidic fumes are kept inside the encapsulation so that the building and cranes are not exposed to an aggressive atmosphere. This makes it possible to install automatic crane systems and to reach higher efficiency in pickling technology because heating of the acid is made possible.

Since these types of plant also became interesting for investors outside Europe, KVK KOERNER offered turnkey galvanizing plants, together with their partners, to the worldwide galvanizing industry. Starting from evaluation of requirements, developing the optimum layout for clients, up to design, manufacturing, delivery, installation, commissioning, training and production assistance KVK KOERNER offers a complete package.

In the company's opinion it is not enough to supply and commission a galvanizing plant. It is equally important to train the personnel - not only on the equipment, but also for galvanizing skills, which is something completely different to equipment supply.

KVK KOERNER specialists have more than 30 years experience as production managers in different types of galvanizing plants. They guarantee quickest production start-up including practical training of galvanizing staff, without making costly mistakes, that can happen without professional support.

One result of an ongoing search for ideas to make the whole process more efficient and easier for the operators is the KVK Pickling Optimizer, which was introduced to the industry at Intergalva 2003 in Amsterdam. This software makes pickling management very easy and is now available in its second update including influence of temperature for evaluating pickling speed.

Another development has been a system to create a movement of the material during the pickling process without using the cranes and pumping the liquid. This equipment increases pickling quality and reduces pickling time significantly.

Although their core business is the pretreatment part of the process, KVK KOERNER are also developing other items to help galvanizers to save energy, increase efficiency and improve safety.

A latest development is the integrated zinc kettle cover. During Intergalva 2018 KVK KOERNER will give a paper about this brand new equipment.



Visit KVK Koerner at Booth 5 at Intergalva 2018 or go to www.koerner.at

A world leader with a proud history

Since its foundation in 1873, W. Pilling have progressively developed into a world-renowned market leader in development, design and manufacture of galvanizing kettles for general, wire and sheet galvanizing operations.

For more than almost a century, W. Pilling have been producing galvanizing kettles. In the very beginning, before adequate welding techniques for galvanizing kettles were available, the joints of those kettles were riveted. The joining techniques have greatly evolved since then, leading to much more reliable kettles.

At W. Pilling today, galvanizing kettles are electro-slag welded in a single pass welding technique

for thick steel plates. Electro-slag welding is a very material-friendly technique that results in a uniform heat input and thus low mechanical stress to the kettle material.

The entire production at W. Pilling's factory is designed to give highest priority to low mechanical stress-formation during fabrication. This makes post-production heat treatment obsolete. For this reason, all bending is done on pre-heated steel.

As kettle changes have become an important expense factor, there has been a notable trend towards kettles thicker than 50 mm in order to achieve a longer kettle service life. W. Pilling are able to build kettles up to 80 mm thickness. It is, however, recommended not to change the thickness of the kettle without consulting the manufacturer of the furnace.

In addition to the classic batch galvanizing kettles, W. Pilling



produce kettles for continuous galvanizing, many of them for aluminium-containing zinc alloys. Those kettles are weld-clad with a special coating. This coating is automatically welded onto the mild steel kettle body to allow the kettle to withstand the very aggressive aluminium.

Today, W. Pilling produce more than 300 galvanizing kettles each year in their highly efficient plant in the North of Germany exclusively using special steel plates made in Europe.

Besides the manufacturing of kettles, W. Pilling have established various services to galvanizers, most notably the well-known and much-valued pump-out and liquid zinc holding services. Within the scope of this service, zinc storage containers are brought to the galvanizer's facility and then filled with liquid zinc for holding during the kettle change. W. Pilling is currently the only service provider that is able to hold the entire

quantity of liquid zinc of even the biggest galvanizing kettles throughout Europe.

In-situ kettle wall thickness tests (USI) are the other pillar of W. Pilling's service division. These ultrasonic tests enable the galvanizer to learn about the thickness of his kettle while filled with molten zinc. The interruption of his production is minimal due to the short duration of only a few hours, even at weekends or during night shifts.

In 2012, the acquisition of the reputable special pump manufacturer W. Dietermann completed W. Pilling's product range. During pump-outs, a high throughput of the pump is crucial to ensure that the zinc is pumped out before becoming solid, once the bath level is below the burners. Galvanizing kettles have grown significantly in volume over the last decades. The requirements on the pumps have therefore increased.

Many liquid metal pumps have not kept pace with those requirements. The most performant Dietermann pumps, however, can pump up to 8 tonnes of liquid zinc per minute (17600 lbs per minute). Even kettles of 1000 tonnes or more can be securely emptied with these pumps, without risk of the zinc freezing.

W. Pilling are proud to be part of the World's Galvanizing Industry as one of its key suppliers.

Every action W. Pilling take is focused on maintaining our leadership position in the world but respecting at the same time our responsibility towards their customers and employees.

📍 Meet the W. Pilling company at the Pilling Bar at Intergalva 2018



Leading galvanizing technology made by Scheffer in Germany

Individual – Tough – Innovative

Scheffer Krantechnik has been developing and manufacturing complex crane and transport systems for a wide range of applications and industry sectors since 1963. By constantly focusing on top quality, both in terms of its products and services, over the years Scheffer has become an veritable institution in the crane and transport industry. Its services range from planning and construction, manufacturing and assembly and a comprehensive after-sales service including training and maintenance. Scheffer Krantechnik accompanies its customers from A to Z, and far beyond.

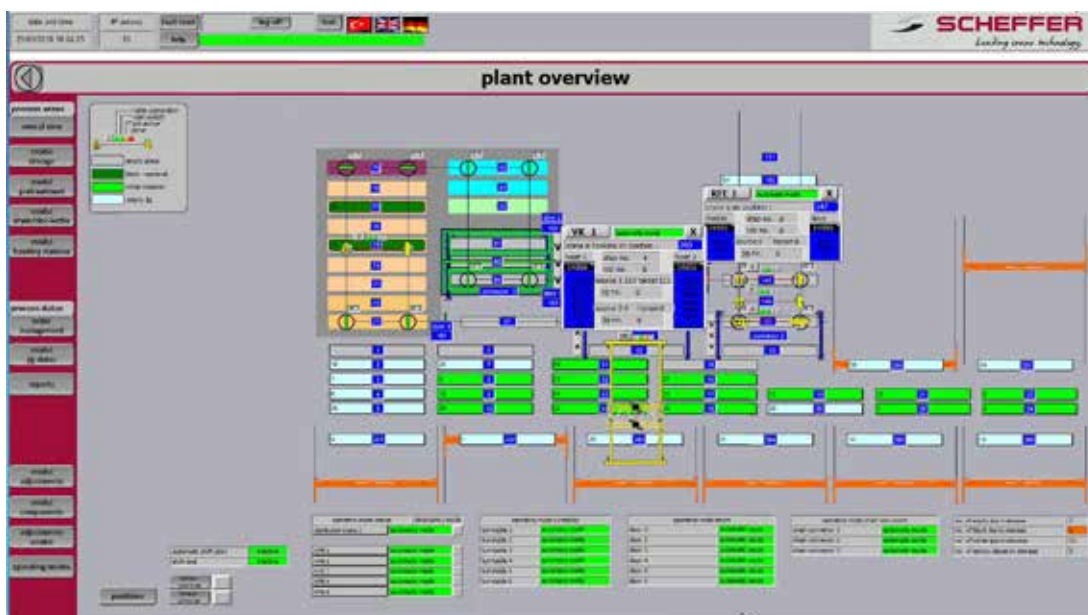
Over the past decades, the company has established itself as one of the world's market leaders and a reliable partner in the steel handling sector and for hot-dip galvanizing plants.

In the steel handling sector, Scheffer's very own swing-free cable tensioning and in-house manufactured magnet lifting technology offers outstanding advantages, such as short cycle times, pinpoint accuracy and increased personal and machine safety.

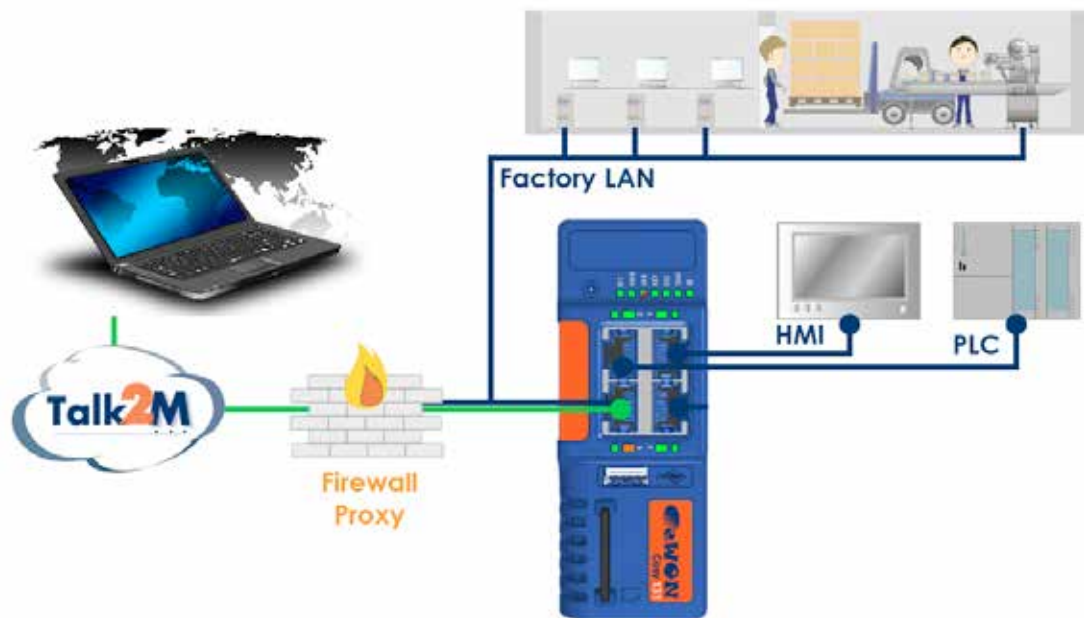
Their extensive knowledge of complex cranes for more than 20 years, has influenced and inspired the development of components for hot-dip galvanizing plants. Many owners and operators of hot-dip galvanizing plants in Germany, Europe and all over the world have chosen the reliability and efficiency of our components as well as complete plant installations.

Their product range comprises all individual components, from manual to fully automatic transport systems, for high performance plants, including material flow planning, layout design and real time simulation to maximise productivity and optimise capital cost.

Customers' needs and demands often differ, but Scheffer's modular system enables them to engineer any layout the customer requires. Scheffer Krantechnik is not only the perfect contact partner for new plants, but they can also be the first port of call when it comes to modernising or upgrading existing facilities.



The overview of the complete system provides the operators of Scheffer automatic systems with an review of the current system allocation, driving orders and any faults in real time.



All equipment, from a conventional overhead bridge cranes, to the automatic drive units, are specifically designed for the rough and challenging working conditions encountered within a hot-dip galvanizing plant and also engineered to meet the tailor-made solutions for customer's individual demands.

The process management software supplied by Scheffer is the heart of the automatic systems. Developed by their inhouse software engineers, who are constantly looking for new ways to use the data from the automatic operation to provide the customer and the plant operators, in a user friendly, manner, important and relative information.

With the SCHEFFER system it is always possible to survey the entire process and to get detailed information by simply clicking on components or jigs. Data such as weight, order priority and much more can be easily displayed. The system is able to highlight specific individual areas such as storage, pretreatment and zinc line and to provide a read out the data. An advantage of this capability is that it is possible to make process

adjustments as needed, e.g. adjustment of all recipes based on the individual acid qualities in the pretreatment section and for the operator to independently modify the entered recipes for the automatic process.

With the data provided by the software, protocols are created which allow the operator to understand the entire production from the pretreatment to the zinc furnace or the storage and set-up area. This feature allows controlling of all areas and workplaces and enables the operators to make optimal use of the plant and improve productivity.

In addition, the software itself offers optimization solutions, in the event that individual orders need to be advanced, end of shift or start times must be set, or jig stations could be better utilized.

Using our service pages in the software, adjustments of components can be carried out without a technician from Scheffer having to be on site. Illustrated manuals and documentation is available to support the maintenance personnel, as well as to provide the ability to set

their own input fields, for the parameterization acquisition of their required data.

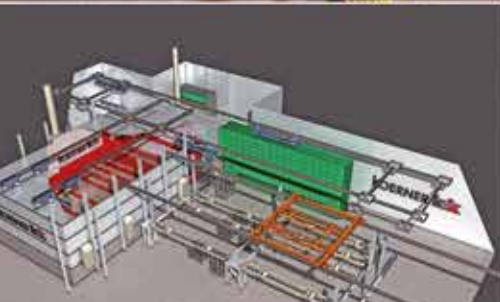
With these software functions, Scheffer enables its customers to gain insight into the overall system and also allows them to customize it to their own system. This way, every plant operator worldwide can use, manage, monitor and check his plant independently.

The Scheffer galvanizing plants will also be equipped with a remote maintenance module, to support all Scheffer components in the system. This allows the Scheffer specialists to connect online with the individual component controls to support our customers in diagnosing and interpreting operational messages, and can carry out minor software adjustments quickly, easily and cost-effectively.

The reliability of Scheffer products is ensured by the company's investment in continuous development and time and again launching highly innovative products and technology.

Visit Scheffer at Booth 5

KOERNER **kk**[®]



Planning



Implementation



Follow-up support

kk[®]
GALVANIZING PLANTS

World-wide the toughest

www.koerner.at

A photograph of a large, dimly lit underground mining tunnel. The walls are rough, brown rock. A bright blue light source is visible in the distance, illuminating a small platform or cart on a track. A long, thin metal pole or conveyor arm extends from the left towards the platform.

your global producer for zinc and zinc alloys

GALVANIZING PRODUCT INFORMATION

- Special High Grade – 25kg Slabs. 1000kg, 1450kg or 1950kg Jumbos
- ZnNi0.12% - 1450kg Jumbos
- ZnNi0.15% - 1450kg Jumbos or 25kg Slabs
- ZnNi0.5% - 1450kg Jumbos or 25kg Slabs
- ZnNi0.5%Bi0.15% - 1450kg Jumbos or 25kg Slabs
- ZnPb0.95% - 1450kg Jumbos
- ZnAl5% - 1950kg Jumbos or 8kg Slabs
- Custom alloys according to customer specifications

Reinforcing the Sustainability of Galvanizing – Rezinal nv



Rezinal nv from Belgium is the trendsetter in sustainable recycling of zinc ashes (zinc skimmings), zinc scrap and other zinc-containing materials. The name Rezinal originates from the abbreviation of its manufacturing purpose: REcycling, ZINc metal and ALloys.

Rezinal is the architect and world leader of zinc recycling; it transforms crude zinc skimmings from hot-dip galvanisers and zinc sheets into high-quality secondary zinc. The secondary zinc and by-products are used in high-value applications, such as hot-dip galvanizing, brass production, and zinc oxide production.

Rezinal has its industrial operations in Zolder, Belgium and serves a global worldwide customer base.

Today, with an infinite capacity, Rezinal is Europe's largest secondary zinc producer and one of the leading producers in the world.

They dedicate most of their R&D efforts to producing secondary zinc using the best available clean zinc recycling technologies.

The state of the art manufacturing technology is designed to contribute to the eco-friendly way of life. Rezinal's goal is to continuously strive to create sustainable value by developing, manufacturing and recycling zinc materials. This keeps the zinc processing industries' chain closed and future generations do not lose any valuable raw materials: an important contribution to a better environment and a greener future.

Zinc skimmings & bottom dross

Hot-dip galvanising is a process that helps protect steel objects against corrosion. During galvanising, the steel objects acquire a protective zinc coating that renders them corrosion resistant. The galvaniser immerses pre-treated steel objects in liquid zinc, at a temperature of about 450 degrees Celsius. The zinc reacts with the



steel, thereby forming a protective coating. After galvanising, crude zinc ashes appear as a thin layer on the surface of the galvanising bath. These are removed after each cycle. Among other things, Rezinal process zinc ashes received from hot-dip galvanising (construction), zinc-coating of wires and pipes, and zinc smelting residues. It is an ecological solution since it keeps the chain closed and zinc ashes are converted into valuable raw materials.

Zinc bottom dross is a by-product generated during the hot-dip galvanising of steel. The liquid zinc reacts with the steel, thereby generating zinc bottom dross and zinc ashes (zinc skimmings). The zinc bottom dross - an alloy of iron and zinc - is deposited on the bottom of the galvanising bath and is regularly removed. Rezinal is a major player in the zinc bottom dross market and upgrades zinc bottom dross into new raw materials for the zinc-processing industry.

Zinc sheets

Rezinal processes old zinc sheets or zinc scrap that has reached the end of its useful life. Some well-known examples of zinc sheet products are roof gutters, rainwater pipes, external wall and roof cladding.

There is no loss of valuable raw materials even during the manufacture or installation of these sheet zinc articles. Rezinal also processes the

remnants generated during the manufacturing process or during installation into raw materials for the zinc-processing industry.

Products and Services

The zinc-processing industry is not only a supplier to Rezinal but is also its largest market. We supply quality products such as zinc metal, zinc alloys and intermediates. For zinc-processing companies, Rezinal is a guarantee that zinc residues will be processed in a legal and sustainable manner and appropriately valued. Rezinal provides a comprehensive service so that companies can focus on their core business.

Rezinal zinc metal

Rezinal recycles zinc ashes and zinc scrap to zinc metal in two different qualities: Rezinal 1 (min. 98.5 % Zn) and Rezinal 2 (min. 98 % Zn). Rezinal offers the most suitable quality, according to the application.

The benefits of Rezinal zinc are:

- available in blocks of 25 kg (1 tonne bundle) and jumbo blocks of 1 tonne;
- ecological: Rezinal tries to find the most ecological production technology. Thus, the energy and water consumption during zinc recycling is significantly lower than when manufacturing primary zinc from ores. Rezinal also wishes to set good example in terms of CO₂ emissions.
- it is more economical than primary zinc manufactured from ores.

Rezinal services

An accurate knowledge of the composition of the galvanising bath is crucial for every galvanising company. Rezinal is aware of this and offers its partners a full galvanising bath analysis. The galvanising bath analysis is highly accurate and is done using the wet chemical method (ICP - Inductively Coupled Plasma), so that hot-dip galvanising companies can maintain the composition of the zinc bath at an optimal level. Rezinal also analyses all the raw materials and finished products supplied. This is the only way in which the company can guarantee the correct valuation of the raw materials supplied and the quality of its products.

The transport and logistics of zinc is subject to a variety of stringent laws and regulations. Rezinal specialises in recycling zinc scrap and zinc ashes (zinc skimmings) into zinc metal and is therefore very well placed to make appropriate logistical arrangements for its customers. Apart from a wide experience and expertise in transport and logistics, Rezinal also provide bins to galvanising companies.

For further information visit www.rezinal.be/eng

EverZinc, The Global Zinc Expert

EverZinc, a Global and Reliable Partner in the **recycling of zinc bearing residues** from the hot dip galvanizing industry



Crude Skimmings - Fine Ashes - Bottom Dross

EverZinc 
The Global Zinc Expert

191 Boulevard Emile de Laveleye
4020 Liège, Belgium
contact.everzinc@everzinc.com
www.everzinc.com

Hasco showcase new technology to reduce plant energy usage

Hasco-Thermic Ltd, a leading supplier, designer and manufacturer of hot dip galvanizing plants, will be showcasing highlights from their recent Innovations, Research and Development Programme at this year's Intergalva event.

Through their wholly-owned subsidiary, Hasco-Tech Ltd, the team at Hasco-Thermic will present their latest range of data-driven technologies designed to improve sustainability, traceability and quality control for the global galvanizing sector.

Innovations include the pioneering HASCO SMART FIRING™ System, a retro-fittable system developed with the latest data and analytical techniques to reduce plant energy usage by up to 20%, and extend the lifespan of the kettle and heat exchanger.

Also showcased is the HASCO REMOTE SOLUTION®, which offers real-time plant monitoring, customisable webpages, SMS and e-mailing capabilities and data logging, while the HASCO QUALITY CONTROL™ software package improves quality control with data-based and fully-traceable quality management.

Hasco-Thermic have maintained a strong focus on innovation and sustainability throughout their 45 years of experience, working closely with the EU on initiatives such as the Increase



of Competitiveness and Export Promotion (ICEP) programme.

Hasco-Tech Ltd were one of eight British Clean Tech companies to win a place on the EU-funded Start-Up Scale-Up Acceleration Programme, and are now helping the combustion industry to reduce carbon emissions.

Visit www.hascothermic.com or Booth 34+36



Visit us
on Stand
36/34

Hasco-Thermic Ltd has established an enviable reputation for reliable, efficient and durable galvanizing plant equipment with nearly 200 references in 34 countries Worldwide.

Customer service starts from the very first enquiry and continues through the life of the equipment.

Our range of services include:

- Plant Design with a view to optimising production
- Equipment that complies with current European Safety Legislation
- Assistance in sourcing a wide ancillary product range
- Skilled Engineers with support available 24hrs a day - 365 days a year
- Performance guarantees which reflect our confidence in our systems



Hasco-Tech Ltd is dedicated to provide industrial IOT (Internet of Things) based energy optimisation and production management solutions for the worldwide market.

Our data driven solutions offer secure and reliable connectivity from production lines to the cloud and maximise the efficacy and cost-efficiency of both production management and equipment maintenance.

Our range of services include:

- Internet of Things based energy optimisation solutions
- Cloud based data management solution
- Real-time plant monitoring
- Data-based and fully-traceable quality management
- Computational simulation

Hasco Thermic
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grillo- handel

- ☐ NF metals
- ☐ Secondary metals
- ☐ NF metal scrap
- ☐ Metal residues



Zinc



Copper



Lead



Tin



Nickel



Aluminium



Minor metals

Wilhelm Grillo Handelsgesellschaft mbH

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47169 Duisburg
Germany
Phone +49 (0)203 40 66 0
Fax +49 (0)203 40 66 101

Grillo Altmittel GmbH

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Wilhelm Grillo Handelsgesellschaft mbH Metallschmelze Tattendorf GmbH

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A unique and new kind of gloss retention from STOCKMEIER... without any chromium or polymers



The research department of STOCKMEIER Chemie has developed a new kind of gloss retention for galvanized surfaces. As with many other developments, emphasis has been placed on the important aspects of environmental compatibility, innovation and sustainability.

Lerapas® ZN 14, the new gloss retention product, contains neither chromium or other heavy metals nor polymers or halogens. The concentrate is not a dangerous product for transport (GGVS / ADR) and the prepared solution is not hazardous to water. Even a subsequent use of the spent solution could be possible (e.g. for make-up of a stripping bath). A pH of about 4 and bath temperatures below 40°C minimize the risks for the employees. The low viscosity causes rapid drying so that the processing times are only slightly extended by the additional production step. The combination of all these features makes this

gloss retention system very unique.

A very low concentration (1 – 2%) and the make-up with tap water instead of demineralized water are further advantages that clarify our weighting of resource protection and cost minimisation.

These advantages are offered with the same high quality as other STOCKMEIER products.

The gloss retention effect of Lerapas® ZN 14 has been confirmed in field trials by customers under extreme weather conditions and in comparison to other products in use that try to achieve similar effects. For one customer, the product has been running for almost 4 years and the quota of complaints based on zinc layer appearance has been reduced to nearly zero. The gloss of the freshly hot-dip galvanized surface is retained. Afterwards the gloss will be transformed slowly and evenly into the desired zinc patina.

This gloss retention system is another example of the continuous development of STOCKMEIER's products for pre- and post-treatment in hot-dip galvanizing. Other projects that illustrate the successful application of the same principles in cooperation with their customers are:

- Alkaline degreasing with very good cleaning effect from just 30°C
- Acidic phosphate-free degreasing with unlimited bath life that does not cause encrustation on the heating elements
- A multifunction pickling additive which, in addition to the reduction of pickling steam, combines many other properties in one product
- Flux additives, which inter alia significantly reduce drying times

📍 Visit STOCKMEIER at Booth 4



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Galvanizing Technologies & German Engineering Dipl.Ing Herwig GmbH



As one of the world's leading suppliers of chemicals and zinc alloys for the galvanizing industry, Dipl.-Eng. Herwig GmbH's main principles are: Efficiency, Flexibility and Vision towards the Future.

The company develops new products for the galvanizing industry and their portfolio includes several specialty processes, recycling of chemicals and projects or building of galvanizing plants. Herwig also holds numerous patents in galvanizing. Their personal involvement in the industry ensures state-of-the-art products because of research and development and a comprehensive problem-solving know-how as the right companion for the galvanizers.

Herwig provides a full range of consulting services aimed to help customers achieve the best galvanizing practices and results:

- Environmental-friendly processes to maximize output and improved galvanized quality
- Custom made solutions to fit each galvanizers' requirements and demands

- In-plant training and knowledge 'refreshing' of galvanizing concepts and best practices
- Seminars in galvanizing

Their product range includes:

- Degreasing agents (environmentally-friendly)
- Inhibitors (to improve the pickling process)
- Zinc alloys (to improve appearance and lower zinc consumption)
- White rust protectors

Research, development and trade

Through active membership in several galvanizing associations worldwide, Herwig is committed to work in the best interests of the industry. In cooperation with international partner companies, special zinc alloys and chemicals have been developed to meet the highest quality requirements. Specialist knowledge and the latest research findings acquired through the close contact with customers are successfully integrated in these processes.

The company is increasingly committed to strengthen its international markets by expanding and consolidating Herwig's global network of sales and partnerships. This ensures that their worldwide customers enjoy greater flexibility and greater market transparency.

Worldwide presence

As a proven specialist in the galvanizing sector, technical support is provided customers through a worldwide network of agents and representatives. Each member of this network operate independently and Herwig adds its support in the form of training courses and joint visits on site. Customers all over the world have their own local contact partner – someone who can support them in their own national language and with an understanding of the local mentality and conditions. The times needed to react to customers' requirements and needs can thus be kept to a minimum.

Visit Herwig at Booth 21+22
or www.herwig-gmbh.com



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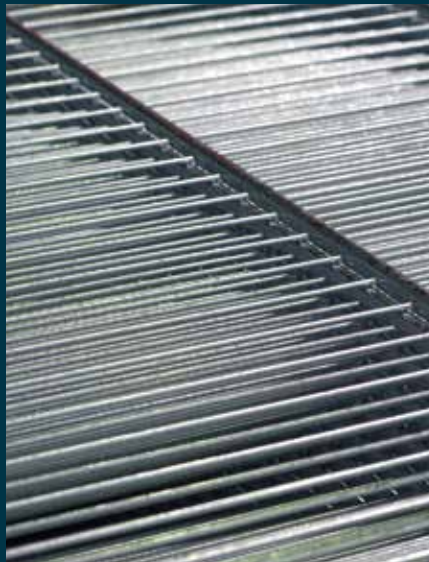
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Nyrstar's Budel Smelter

Resources for a Changing World

Fast Facts

TECHNOLOGY: roast, leach, electrolysis (RLE) smelting, and a unique biological waste water treatment plant

PRODUCTS: special high grade (SHG) zinc, zinc alloys and sulphuric acid

PRODUCTION 2017: 248 kt zinc metal, 263 kt sulphuric acid

EMPLOYEES: ~ 455



Location

The Budel zinc smelter is situated at Budel-Dorplein in the southeast of The Netherlands near the Belgian border and close to the majority of Nyrstar's customers in the major industrial centres of The Netherlands, Belgium, Germany, Luxembourg and northern France.

Overview

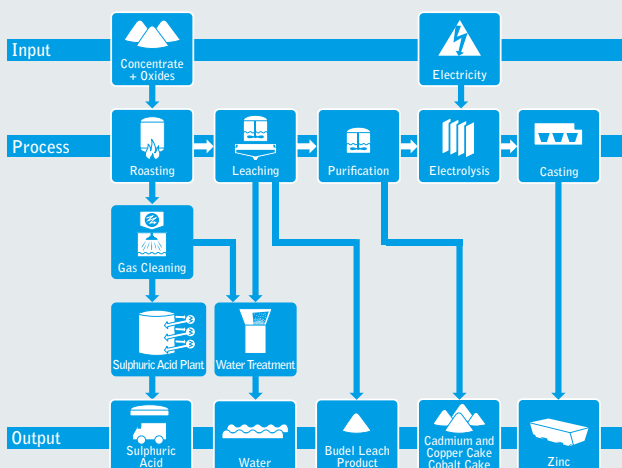
Nyrstar's Budel smelter produces zinc and zinc alloys. The advantage of the Budel smelter is its very high zinc recovery rate as a result of circuit design and feedstocks.

Budel's feedstock from Nyrstar primarily consists of high grade sulphide concentrates, zinc oxides and other secondary feeds.

Budel's two key products are SHG and zinc galvanizing alloys. In addition, the site produces cadmium, copper and cobalt cake, sulphuric acid and Budel Leach Product that contains lead and precious metals and is used as a raw material by secondary smelters. Nyrstar's fumer in Hoyanger partly treats this material to extract valuable materials for Nyrstar.

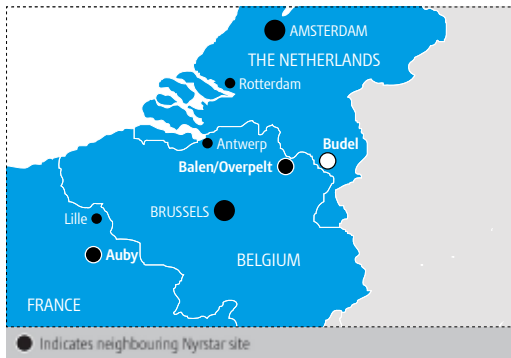
Nyrstar Budel is a highly energy intensive smelter. For example, the site operates a state of the art water treatment plant which supports keeping its environmental footprint to a minimum.

Production process at Budel



Budel and Nyrstar's operations worldwide

Budel, The Netherlands



MINING



METALS PROCESSING



HEADQUARTERS

- | | | | |
|----------------------------|------------------------------|-----------------------------|--------------------------|
| ① Aubuy, France | ④ Clarksville, USA | ⑦ Hoyanger, Norway | ⑩ Myra Falls, Canada |
| ② Balen/Overpelt, Belgium | ⑤ East Tennessee Mines, USA | ⑧ Langlois, Canada | ⑪ Port Pirie, Australia |
| ③ Budel, The Netherlands | ⑥ Hobart, Australia | ⑨ Mid Tennessee Mines, USA | ⑫ Zurich, Switzerland |

Nyrstar Budel is part of Nyrstar, a global multi-metals business, with a market leading position in zinc and lead and growing positions in other base and precious metals, such as copper, gold and silver. Nyrstar has six smelters, one fumer and four mining operations, located in Europe, Australia and North America, and employs approximately 4,100 people. Nyrstar's global operations are located close to key customers and major transport hubs to facilitate delivery of raw materials and distribution of finished products.

The Company is incorporated in Belgium and has its corporate office in Zurich, Switzerland. Nyrstar is listed on Euronext Brussels under the symbol NYR.

History

Over 125 years ago, in 1892, the Budel zinc factory was founded by the Dor brothers. The community in which Nyrstar Budel operates is still called 'Budel-Dorplein' to this day.

Until 1973, a thermal process heating calcine and coal in horizontal retort, was used for zinc production. In January 1974, a new plant on site was commissioned to allow for a more efficient and cleaner electrolytic zinc production process.

The zinc plant chronologically operated under the name Kempensche Zinkmaatschappij (KZM), Budelco, Pasminco and Zinifex - until Nyrstar was founded in 2007.

Further historical facts and anecdotes are available at: www.historiekzm.nl.

See Nystar at Booth 12 or visit www.nyrstar.com or email communications@nyrstar.com



About Bonan Technology




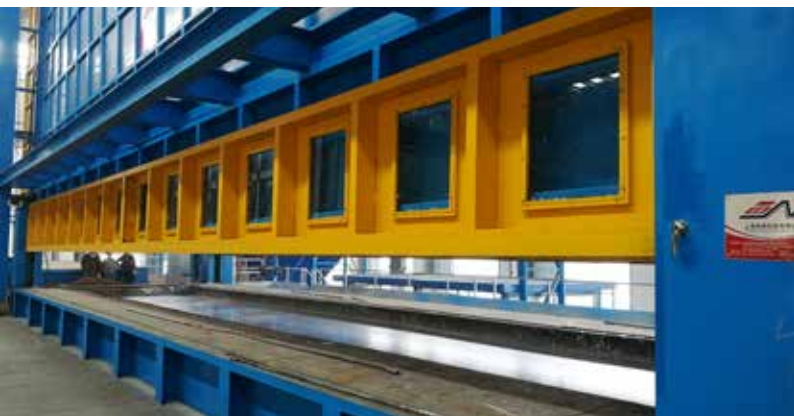
Bonan Technology Co., Ltd. is a Chinese galvanizing equipment manufacturing company with its origins as the representative of some European equipment manufacturers in China. The company is now fully engaged in the design, manufacture, installation, commissioning and training around the world. The company's headquarters is located in the Shanghai Jiading Commercial District whilst the factory is situated in Zhangjiakou City, Hebei Province in north China. The factory covers an area of 32.8 acres. In April 2013, 50 acres of land were bought to allow further expansion of production.

The company has designed and manufactured 260 galvanizing plants/lines in China, Holland, Australia, Turkey, Russia, India, Jordan, Saudi Arabia, South Africa, the United States, Egypt, Syria, Azerbaijan, Romania, Albania and Pakistan.

This experience is supplemented by monitoring developments in other parts of the world – to gain the most advanced techniques and latest market trends. This knowledge has resulted in technologies that result in lower zinc consumption, lower energy consumption, as well as excellent quality.

Plants that have been supplied by the company include jobbing galvanizing lines for construction parts: such as steel tower, tube tower parts, highway rails and lighting poles, etc. Other installations include galvanizing lines for steel pipes (suitable for 1/2"-8" steel pipes) and galvanizing lines for small parts (suitable for bolts, nuts and other small parts). On-site training on galvanizing techniques can also be provided.

 You can learn more about Bonan Technology Co., Ltd at Booth 33+35 at Intergalva 2018.



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Johanna wants to save lives. She couldn't without metals.

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