



RACE TO ZERO

Sustainability offers opportunities and challenges for the galvanizing industry

Speaker

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President of AOT – Austrian Surface Technology Association



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CEO ZINKPOWER

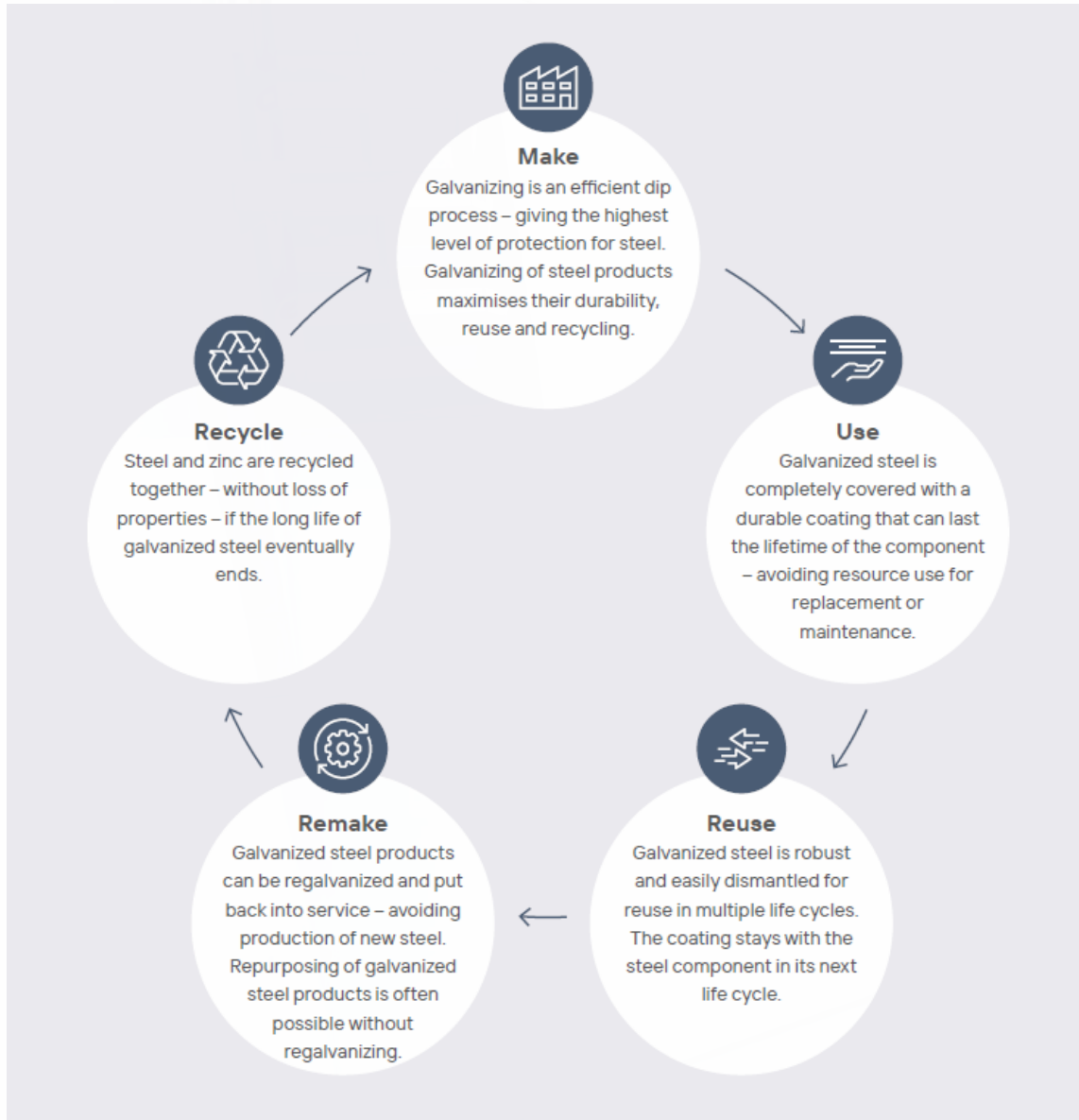
The construction industry is more resource-intensive than any other



And is responsible for

- 🔗 50% of the raw materials extracted
- 🔗 50% of the total energy consumption
- 🔗 33% of the water consumption and
- 🔗 35% of the waste produced

Galvanized steel is completely circular



Hot-dip galvanized steel is

🔍 durable

🔍 reusable

🔍 repairable

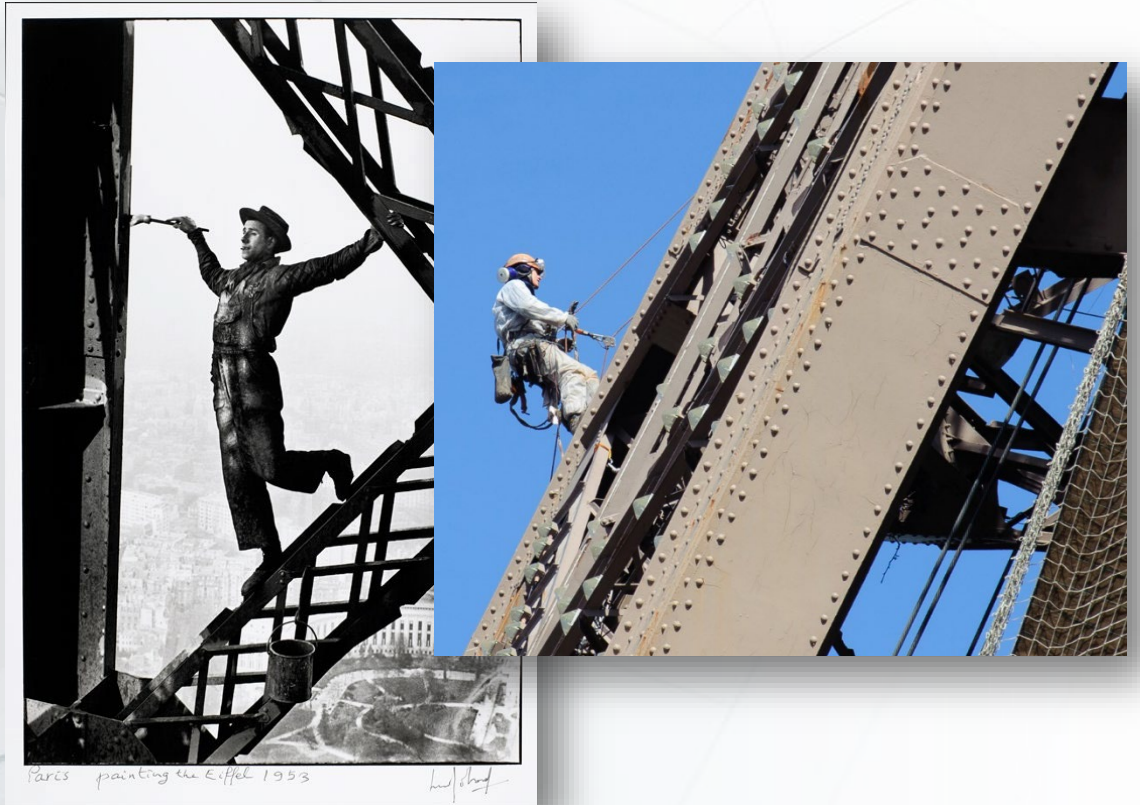
🔍 recyclable

Hot-dip galvanized steel is

durable



No maintenance: Galvanized corrugated iron hut from 1898



The Eiffel Tower's paint coating is being renewed for the 20th time

Hot-dip galvanized steel is reusable



Reuse of external staircase saves 22 tons of CO2



Laboratory: Reuse of 165 t of galvanized steel saves 218 t of CO2



Reused galv. greenhouse



Reused soccer stand

durable

reusable

recyclable

Hot-dip galvanized steel is **repairable**

Refurbishing of hot-dip galvanized steel saves CO2



LCA paper by CE Delft: Regalvanizing of 1 km highway crash barriers (including transport, disassembly and reassembly) saves 112 t of CO2 (5 times lower footprint) and 390 MWh energy



Never too late: Regalvanizing of painted steel components gives them a new longlasting life.

durable

reusable

repairable

Hot-dip galvanized steel is

recyclable



Recycling of galvanized steel

- 🔑 No downcycling: Recycling without any loss of quality
- 🔑 In Europe:
 - 88 % of steel is recycled
 - 11 % of steel is reused
 - in total: 99 % of steel is recovered
- 🔑 Steel is a Recycling world champion

Make galvanizing green

ENVIRONMENTAL PRODUCT DECLARATION
as per ISO 14025 and EN 15804

Owner of the Declaration	bauforumstahl e.V. & Industrieverband Feuerverzinken e.V.
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-BFS-20180167-IBG1-DE
Issue date	21.12.2018
Valid to	20.12.2023

Hot-dip galvanized structural steel:
Hot rolled steel sections and heavy plates
bauforumstahl e.V. &
Industrieverband Feuerverzinken e.V.


www.ibu-epd.com / https://epd-online.com



BATCH HOT DIP GALVANIZING OF STEEL PRODUCTS TO EN ISO 1461 EUROPEAN AVERAGE

BASED ON: REVISION: CERTIFICATION N°: ECO EPD REF. N°:

➊ Reduce Carbon footprint of galv. Steel

➋ CO₂-Footprint of 1 t of galv. Steel:
1320 kg -14,6% caused by galvanizing
(Source: EPD Galvanized structural steel)

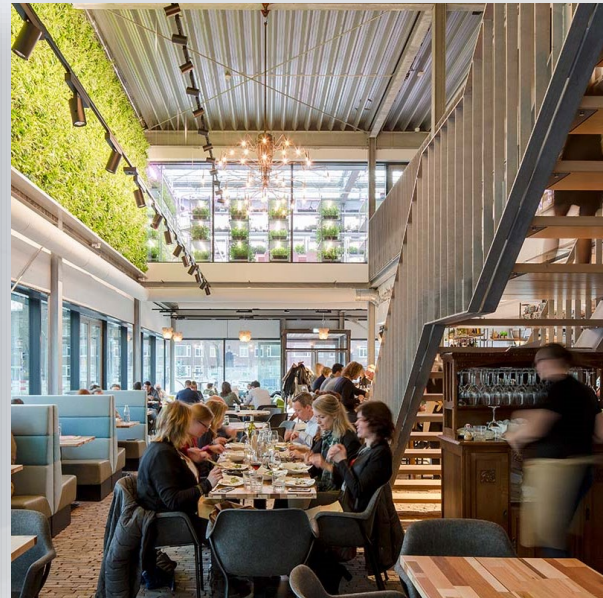
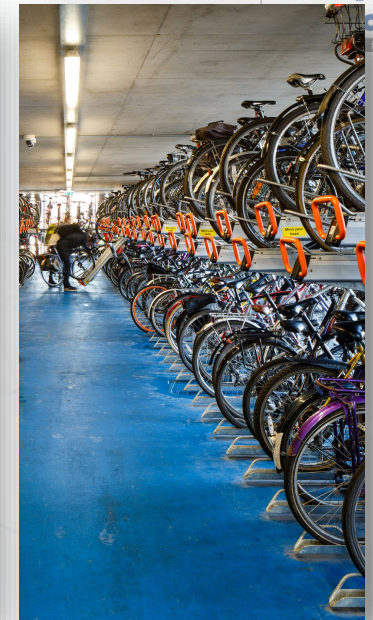
➌ By using green (non-fossile) energy
the CO₂ emissions in our galvanizing
plants can be reduced by more than
90%.

➍ Zinc must become greener

Roadmap Decarbonization

- 👉 **Input by galvanizers and suppliers**
- 👉 **Defines sustainability targets and shows how these sustainability targets can be achieved**
- 👉 **Guide for galvanizers and suppliers, but is also an important paper for making demands on policymakers**





New markets for Galvanizing

- 🔗 electric Highway, Urban ropeway systems, Bike-Parking
- 🔗 Urban Farming, Rooftop- Greenhouses
- 🔗 Agri-PV

Thank you for your attention!



Any Questions?

Let's get connected!

