

Sustainability



Küttner: international competence in metallurgical plant engineering

As an owner-managed group of companies, Küttner specializes in the development and construction of high quality systems. Our customers benefit additionally from the advantages of our individual solutions, our services, and our EPC expertise in the various industrial sectors; such as the ferrous industry, non-ferrous, energy and environmental industries.

The diverse challenges in process engineering have allowed us to grow into a strong international group, dedicated to the further development of existing technologies and the development of new processes and technologies.

Explore our group of companies, our diverse services around innovative plant engineering for the industry and numerous examples of successful cooperation with our customers from around the world.



Content

- 03/04 Introduction**
Our Requirements
- 05/06 Economy**
Goals & References
- 07/08 Ecology**
Goals & References
- 09 - 14 Ecological References**
Detailed information about our flagship references
- 15/16 Society**
Social sustainability - let's not forget our environment



Introduction

Efficiency and cleanliness along the process route, integrated solutions, energy efficiency, environmental protection and the sustainable use of resources have long been more than just catchwords: They are a fundamental attitude, because we take our responsibility for the global challenges of the present and future seriously. With our green technologies, we work against climate change indirectly through our customers. That is why the cooperation with customers, partners, operators, maintenance engineers, suppliers on the one hand, and our own employees as joint experts in interdisciplinary teams on the other hand, are essential aspects of our projects.

Iron & Steel

As a strong partner in the metallurgical industry, we analyze and build tailor-made systems for emission detection, heat recovery and dedusting. For the blast furnaces we offer convincing solutions for the input of raw materials and energy as well as the control of the blast furnace. We have also implemented the recycling of residual materials from integrated steel mills in several projects.

Non-Ferrous

For thermoprocessing systems in non-ferrous metallurgy, our specialists develop individual, sustainable system solutions - in green field as well as optimizing existing systems. The focus is on recognizing the potential value of energies and resources along the process chain.

Energy & Environment

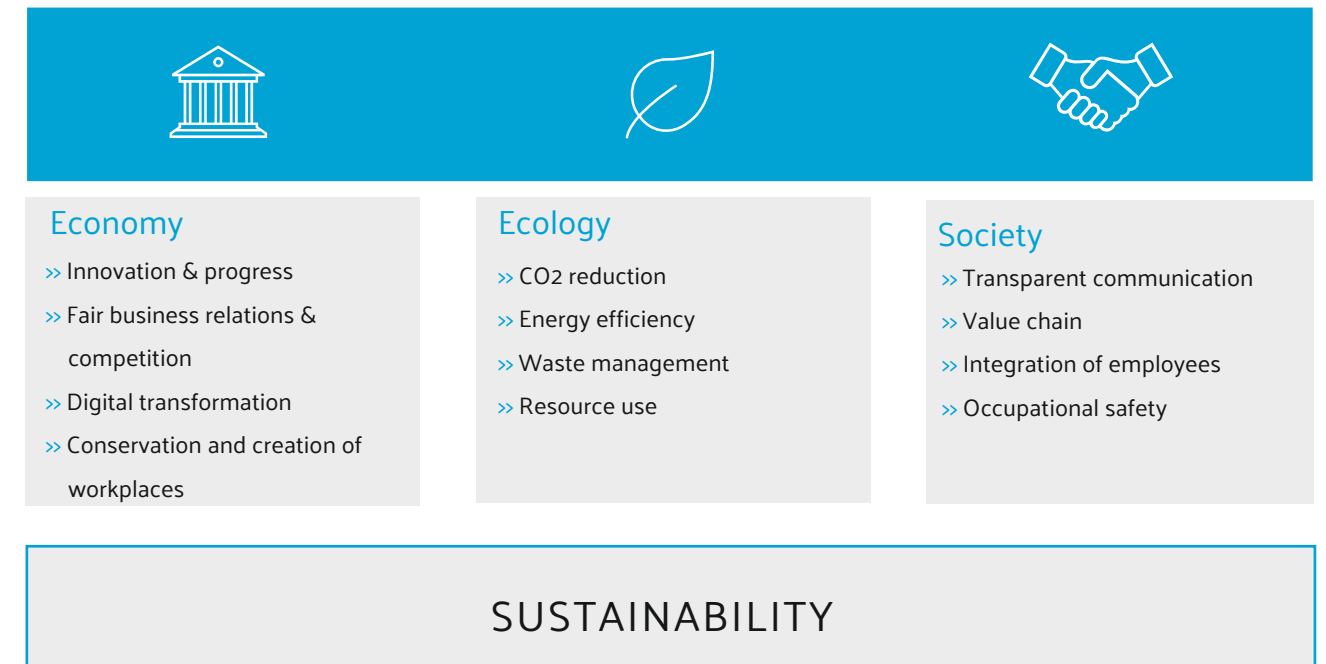
In energy and environmental technology, we can look back on a large pool of executed references in the thermal recycling of residues and sludge, the use of industrial process heat and the purification of industrial waste water. In addition, we get creative in developing new ideas and special customer requirements.

Electric & Automation

New production processes and flexible process technology place ever increasing demands on electrical and automation systems. Decisive here is a perfect integration of electric and automation; only in this way can the complex production processes be mastered and optimized.

Our Requirements

Responsibility for the global challenges of the present and future:



Classification

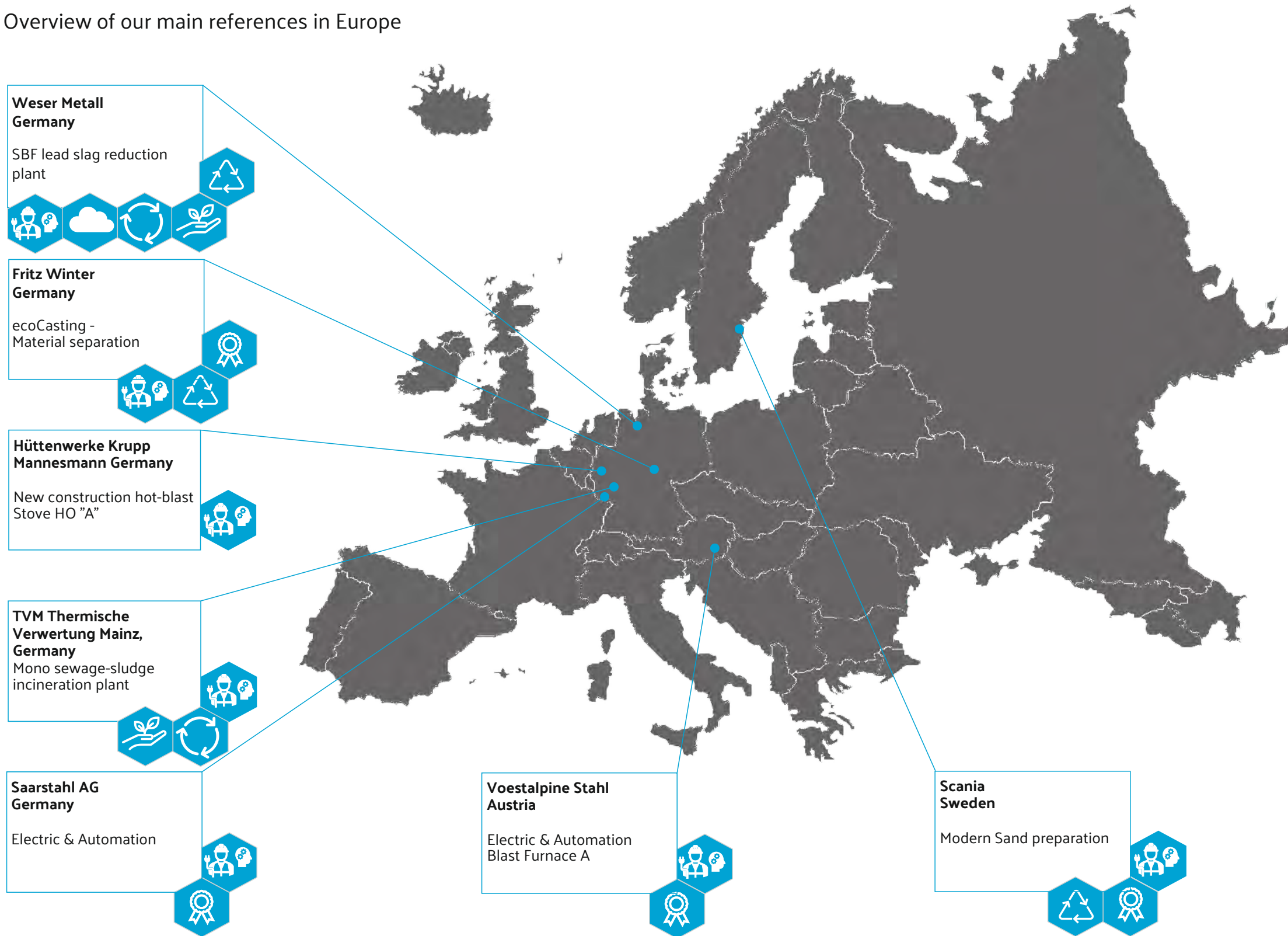
Definition of our flagship references with pictograms



Economic sustainability - our technologies for the future

For Küttner, economic sustainability means the life of corporate governance. Compliance with the rule of law, human rights and international economic standards of conduct is a matter of course. We build on the success of the past.

Overview of our main references in Europe



Our Goals:

Corporate Governance >>

- ☑ Live by example

Digital Transformation >>

- ☑ Document Management System (DMS)
 - ☑ Artificial Intelligence
- > Establish building with BIM in the engineering department
 - ☑ Virtual Reality

Innovation Culture >>

- > Innovation representative from management
- > six-month innovation circle

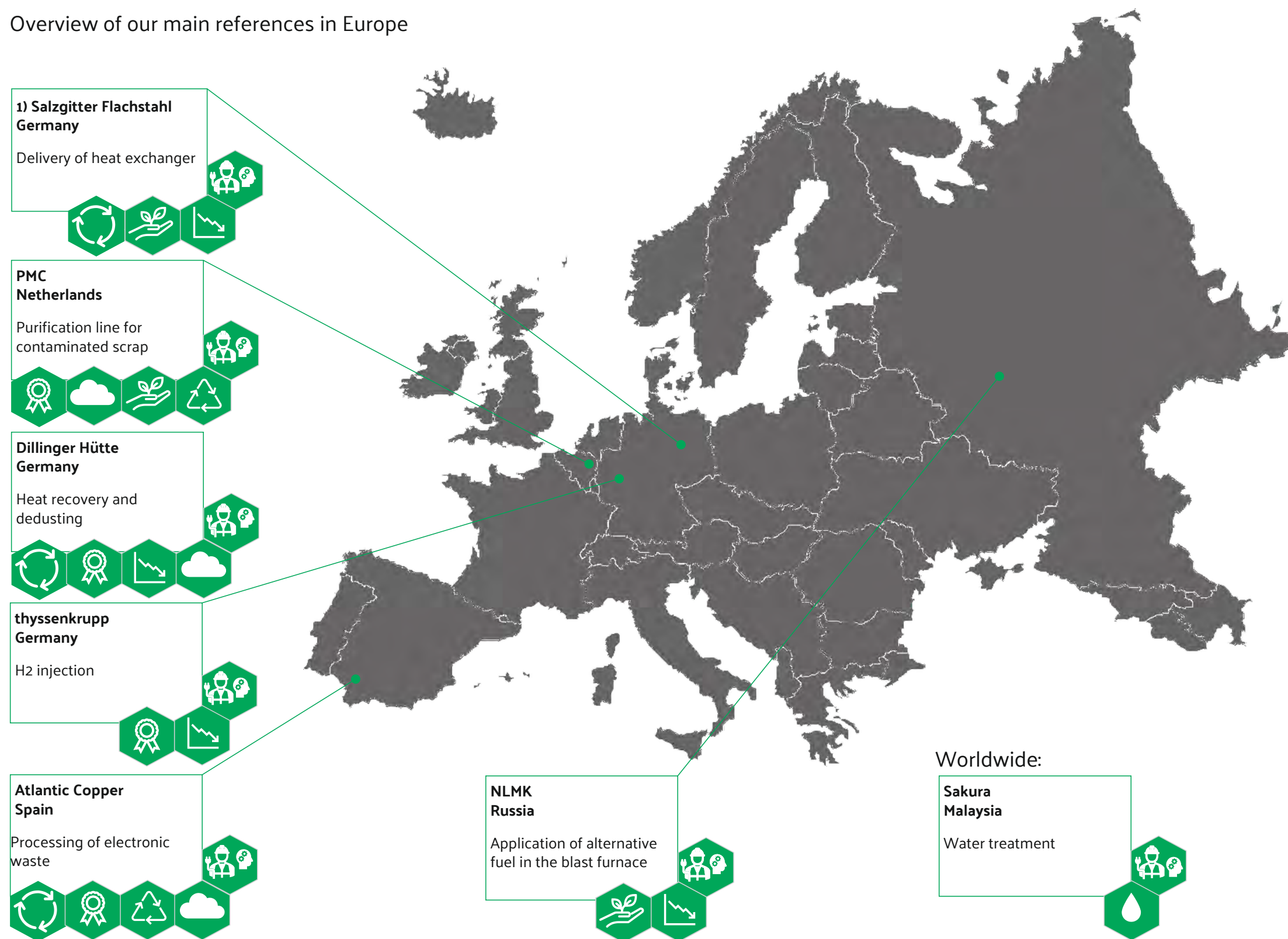
Cooperations >>

- ☑ Institutes/Universities/Laboratories

Ecological sustainability - our contribution to combating climate change

For Küttner, based on the successes of the past, ecological sustainability also means further progress and the development of environmentally friendly technologies beyond the previous limits. We face the challenges.

Overview of our main references in Europe



Our Goals:

Mobility of the employees >>

- Expand home office capabilities
- Subsidise the use of public transport
- Electric charging station at the office
 - E-Car as company car
 - > Job Bike

Sustainable office organization >>

- Digital signature
- Organization of documents (iFinder, DMS)
- > Digital documentation for customers

Projects for trainees >>

- Energie Scout Project from IHK

Office >>

- Conversion to LED lighting

Sinter cooler revamp with the target of heat recovery

Dillinger Hütte, Dillingen
Germany

» Suction volume 500,000 Nm³/h

» Mean hot air temperature
350 °C (max. 400 °C)

» Extractable heat
46 MW

» Water temp. after boiler
190-200 °C

» Water pressure
30 bar

» Max. filter inlet temperature
250 °C

» New cooling air fans
2 x 500,000 Nm³/h

Optimization of heat recovery:

» Extension of the sinter cooler hood

» Sinter cooler sealing

» Filter plant

--> CO₂-certificate



CO₂ Certification

Purification line for contaminated scrap

Purified Metal Company, Farmsum
Netherlands

» Recycling of contaminated steel scrap
(asbestos, chromium-6, mercury)

» Design Capacity 150,000 t/a

Challenge/Claim

- » New process - unique in the world
- » Combination of mechanical processing, foundry and waste incineration technologies
- » Advanced interface management
 - » Highest occupational safety requirements due to handling with asbestos contaminated materials

Approach

- » Combined melting and scrap cleaning process with efficient exhaust gas cleaning
- » NO_x from 1.200 mg/Nm³ -> 85 mg/Nm³
- » Hg from 20 mg/Nm³ -> 0.02 mg/Nm³

World debut
-
Pioneering technology



Hydrogen Injection in Combination with Reactive Oxycoal

Thyssen Krupp Steel, Duisburg
Germany

Application for one tuyere

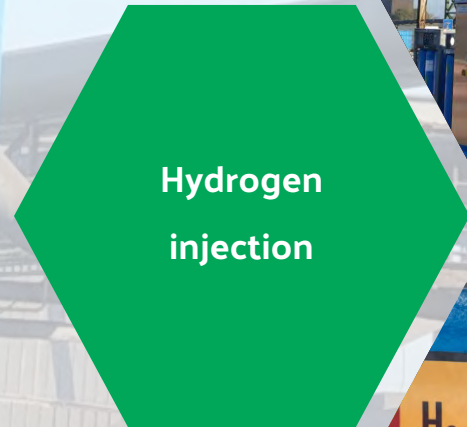
- » Hydrogen injection
- » Küttner Reactive Oxycoal
(Registered trademark)

Challenge/Claim

- » Balance between CO₂ optimization
and economic operation

Approach:

- » Combination of hydrogen injection
and Reactive PCI/Oxycoal
- » Optimal combination to improve the
CO₂-footprint with simultaneous
optimized PC injection for maximized
coke reduction



Social sustainability - let's not forget our environment

At Küttner, sustainability doesn't stop with economical and ecological issues. The Küttner Group stands for fair operating and business practices and a modern company organization with flat hierarchies. We live a partner-like, fair cooperation with employees, customers, partners and suppliers. Whether in interdisciplinary teams, in fair competition or with great transparency in open book procedures in tendering phases. Other important factors are the complete observance of value chains, including the highest requirements for occupational health and safety, compliance with minimum wages and the code of conduct, as well as observance of human rights. We will not accept any form of forced labor or child labor and we also expect this from our agents, suppliers and other business partners.

Our most important resource is our employees, who are experts and specialists in their fields. We want to shape the future together.



SOCIETY

Our Goals:

Support good working atmosphere >>

- Summer Party
- Christmas Party
- > Invitation to Innovation circle
- Company sports group
- Dragonboat

Respectful contact with employees >>

- Lead with trust
- Support and include
- Expand home office
- Knowledge transfer

Projects for trainees >>

- Energie Scout Project from IHK

Donation to kindergarden >>

Cooperation >>

- Primary school information about careers

Social Projects >>

- > Support international construction sites

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Non-Ferrous



Energy & Environment



Electric & Automation

