

WeCo

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UrbanGold
recycling for a green future

COMBINED COMPETENCE UNDER ONE ROOF

Mettop Group - Presentation



Leoben 01st of October 2020

Mettop Group Presentation



Organization Chart

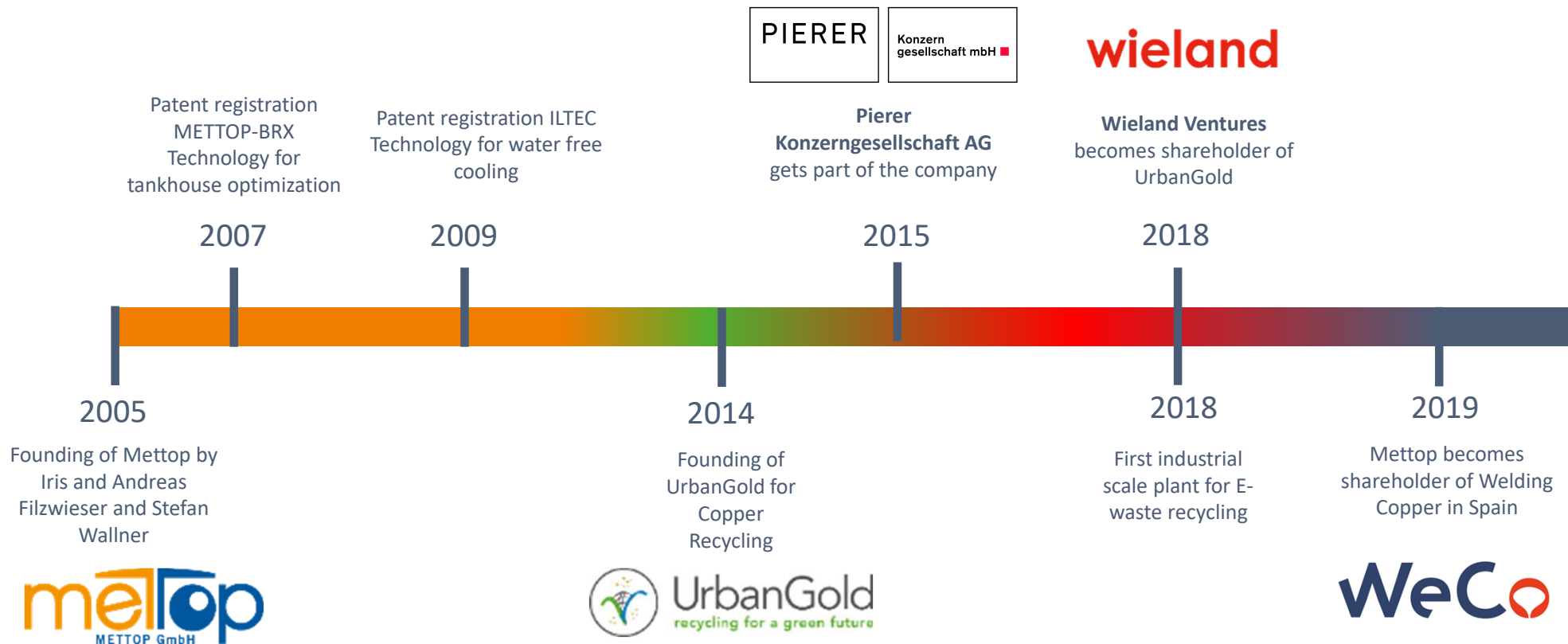


Key to Mettop's position as an expert partner is the open-minded, creative spirit of our team. We develop innovations in cooperation with renowned institutes and universities and especially with YOU! This interaction with third parties constantly provides new dynamics and fresh inspiration.

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History and Timeline



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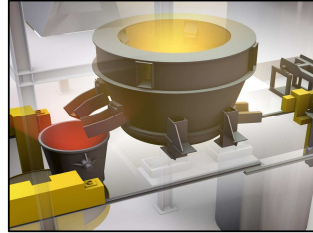
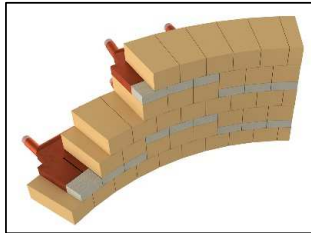
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UrbanGold
recycling for a green future

WeCo

Overview Products and Services



Non-ferrous metals units

Products:

- ◆ PolyTBRC[®]
- ◆ HENRI[®]
- ◆ Gas Purging Systems
- ◆ Coolers



Refractories non-ferrous

Products:

- ◆ 3D Engineering + supply
- ◆ CFD modeling
- ◆ HT-calculations
- ◆ EXP-calculations

E-waste recycling UrbanGold

Products:

- ◆ Process Engineering
 - ◆ UG Compact
 - ◆ UG Flex
 - ◆ UG Classic
- ◆ Market Studies

Tankhouse technology

Products:

- ◆ METTOP-BRX[®] Technology
- ◆ Cathode spacers
- ◆ Complete Tankhouse

ILTEC for vessel cooling

Products:

- ◆ IL-B2001[®]
- ◆ Ionic Liquid Technology for vessel cooling
- ◆ Furnace integrity optimization

Overall Process & Technology Consulting

Field Studies & Trainings

Process and 3D Plant Engineering

Research & Development & Innovation

DigMet



Metallurgical Optimization

Mettop's specialists deeply understand the overall metallurgical processes

It is not sufficient to know that something will occur – we need to know when and why. Therefore, it is important to understand the background of a process and raise awareness for the fundamental influences and interrelationships.

Mettop's core team is a group of metallurgists with extensive process and facility know-how. But more important, with knowledge of the chemical and metallurgical basics and interrelationships.

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Tankhouse Solutions

More than 400 A/m² –
yesterday an illusion, today reality

Innovative technology to us means considering new directions and adopting unconventional approaches to maximize productivity and quality.

In order to increase the productivity of a copper tankhouse, the current efficiency and/or current density have to be increased..



ILTEC Technology

Revolutionary new and safe -
Ionic Liquid Cooling Technology

The new cooling medium IL-B2001 enables a substitution of water as the state-of-the-art cooling medium in an easy way and creates a perfectly safe operation mode for all application fields.

The compact design, together with a low maintenance operation mode, a perfect reliability and safety in terms of cooling are only some of the features of the ILTEC Technology. Assembly, installation and start-up on site are conducted within a few days.

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Cathode spacers

Well engineered and proven Mettop Technology

An effective way to increase the productivity of an existing tankhouse is the use of only one specific part of the METTOP-BRX Technology, the cathode spacing devices.

The customized engineered spacing system based on tested long-lasting materials and optimized geometries is delivered as a complete package and installed by Mettop.



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Overview Products and Services



ionicLife cast

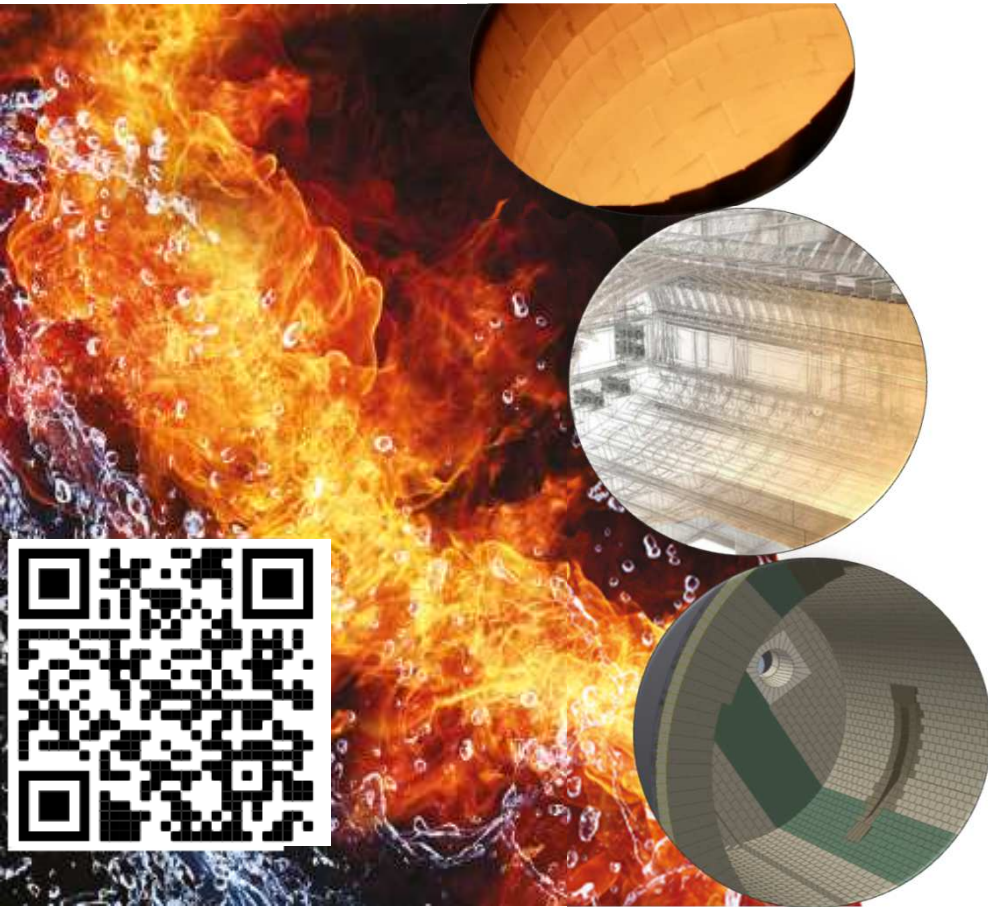
Unique copper-in-copper cast technology using ionic liquids as cooling media.



Mettop and **WeCo** have developed an innovative casting process enabling the only real copper-in-copper pipe cast by cooling with ionic liquid. The result is excellent metallurgical bond between copper tube and copper casting which leads to both long lifetime and recyclability of the copper cooler.

 /weco-welding-copper





Refractory Management

The key to minimizing operating costs

Beside an optimized process the refractory performance is the key factor for low operating costs in nearly all metallurgical vessels. To define the right quality based on the wear mechanism is just the basis. A proper refractory engineering in terms of shapes, installation procedure, thermal expansion calculation and so on is as important as a perfect installation itself.

But for us, Refractory Management means much more. An equal wear of the entire lining material at the end of the furnace lifetime is one of our goals.



UrbanGold

Recycling for a green future

UrbanGold is responsible for recycling, process design, and process modelling. UrbanGold's vision is to set a new standard in metallurgical recycling technologies in the field of electronic scrap, as well as complex valuable and precious metals containing materials.

Over recent years, flexible recycling concepts for almost all kinds of e-wastes have been developed – ensuring a high yield for all relevant valuables. In combination with UrbanGold's HENRI smelter, this represents a new state-of-the-art for e-waste processing.



Mettop Academy

Training courses and seminars

Mettop offers a wide range of practice-orientated training courses and seminars on various topics related to non-ferrous metallurgy, combining experience and knowledge with profound data research.

Trained personnel are beneficial for both, new and already running systems. In new installations, full availability is ensured in a short time. In already operating systems, competent, trained staff ensure and maintain high availability and productivity.

