## Introducing Mettop



Mettop GmbH, founded in 2005 by Dr. Iris & Dr. Andreas Filzwieser, is an independent Austrian engineering company, specialised in the design, optimisation, and engineering of technologies for metallurgical processes.





It is active in the field of pyro- as well as hydrometallurgy of non-ferrous metals and recently also started with innovative cooling systems for the iron and steel industry. With it's headquarter in Leoben, Austria but customers all over the world, Mettop is a global player for creating new pathways for the entire metallurgical industry.

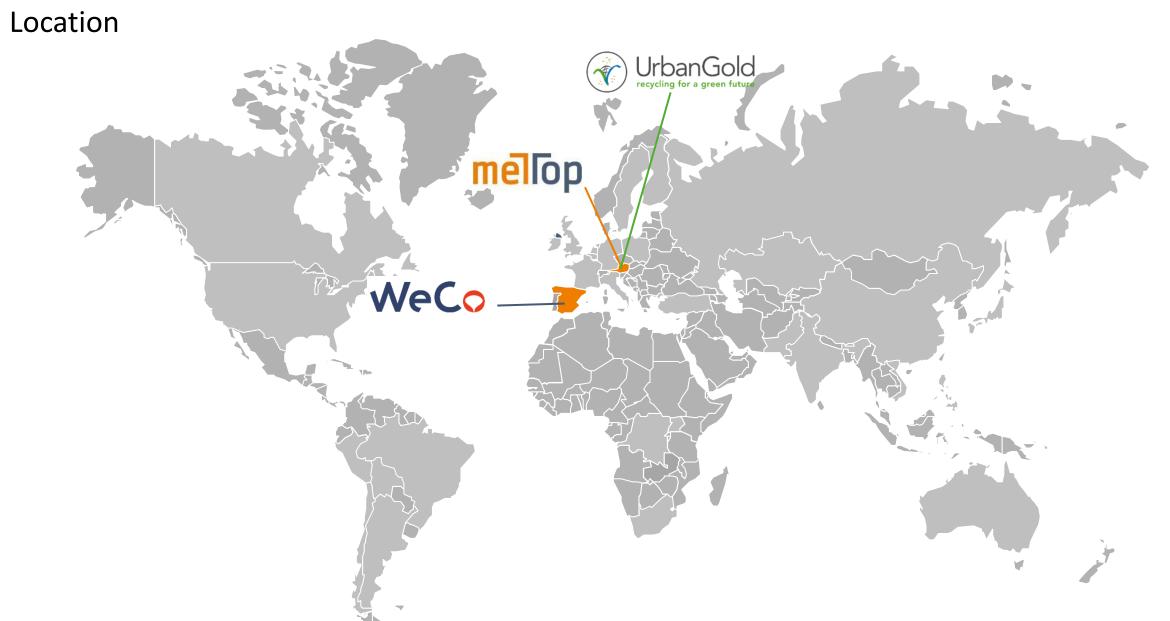


### **Organization Chart**



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.







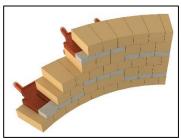
### Customers worldwide

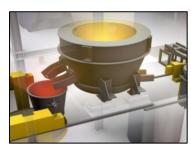




#### **Overview Products and Services**













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Innovation



#### **Products:**

- ◆ PolyTBRC<sup>©</sup>
- ♦ HENRI®
- ◆ Gas Purging Systems
- Coolers

ionicLife

#### Refractories nonferrous

#### **Products:**

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

#### E-waste recycling UrbanGold

#### **Products:**

- Process Design & Engineering
- Market Studies
- Technical Process Management
- Recycling Technologies

# Tankhouse technology

#### **Products:**

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

# ILTEC for vessel cooling

#### **Products:**

- ♦ IL-B2001 <sup>©</sup>
- Ionic Liquid
   Technology for vessel cooling
- Furnace integrity optimization

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**Overall Process & Technology Consulting** 

**Field Studies & Trainings** 

**Process and 3D Plant Engineering** 



**Overview Products and Services** 



# **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.





**Overview Products and Services** 



## **Tankhouse Solutions**

More than 400 A/m<sup>2</sup> – 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..





**Overview Products and Services** 



# **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.





**Overview Products and Services** 



## **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 longlasting materials and optimized geometries is delivered as a complete package and installed by Mettop.





**Overview Products and Services** 



# ionic Life cast

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

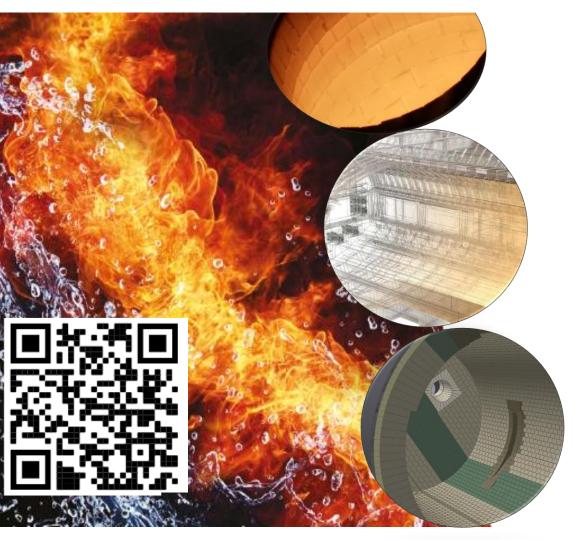


**Mettop** and **WeCo** have developed an innovative casting process enabling the only real copper-in-copper pipe cast by cooling with ionic liquid. The result is excellent metallurgical bond between copper tube and copper casting which leads to both long lifetime and recyclability of the copper cooler.





**Overview Products and Services** 



# **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.





**Overview Products and Services** 





## **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.

/company/urbangoldgmbh



**Overview Products and Services** 





## **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.

