

COMET PROJECT

PROMETHEUS – PRODUCTION AND PROCESSING OF METALS FOR HIGH-PERFORMANCE, ENERGY EFFICIENCY, ENVIRONMENTAL PROTECTION AND SUSTAINABILITY

Main location: Ranshofen (Upper Austria)

Other locations: Leoben (Styria)

Thematic area: Material & Production

Thematic focuses

- New Processes
- New Knowledge
- New Materials

Planned realisation and outcomes

The materials processing industry is striving for more sustainable, robust and efficient process routes to meet the challenges of the present and future. Global issues such as the climate crisis, pandemic, Ukraine war, supply chain bottlenecks and skills shortages require a rethink in many areas.

In order to counter these developments by increasing efficiency and quality while simultaneously reducing CO₂ emissions, ProMetHeus aims to optimally combine classic materials research and improvements in process technology with the diverse methods of digitalization. This should make it possible to develop innovative alloys, design highly efficient process routes, establish completely new reuse and recycling concepts, generally ensure reductions in scrap and downtimes in production and ultimately strengthen Austria as a business location in the European Union.

The project consortium consists of renowned industry and research partners from a wide range of specialist areas and is led by the LKR Leichtmetallkompetenzzentrum Ranshofen GmbH, which acts as an interface between all subject fields.

Divided into two areas, new process routes, materials and methods for process control are being developed in four multi-firm projects and one strategic project. The so-called ProMet-Tools, based on automatic image processing, sensor systems and artificial intelligence, create cross-project synergies. In addition, the utilization of comprehensively generated data will accelerate the development of processes and materials.

The combination of ProMet-Tools with innovative approaches enables the implementation of completely new process routes, the creation of completely new and highly sustainable value chains, efficiency increases in production plants and an increase in the robustness of series processes.

In addition, the strategic project will establish holistic alloy development based on artificial intelligence methods with a focus on sustainability, robustness of the process chain and recyclability of the material.

ProMetHeus aims to contribute to climate neutrality and to strengthen the competitiveness of the industry by creating new impetus for sustainable future solutions.



COMET FACTSHEET

Selected company partners (max. 10):

1. EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H.
2. Gebauer & Griller Kabelwerke Ges.m.b.H
3. Hammerer Aluminium Extrusion GmbH
4. MARK Metallwarenfabrik GmbH
5. MELTEC Industrieofenbau GmbH
6. Rübiger GmbH & CO KG
7. voestalpine BÖHLER Bleche GmbH & Co KG
8. voestalpine Metal Forming GmbH
9. 4a engineering GmbH
10. iba Austria GmbH

Selected scientific partners (max. 5):

1. AIT Austrian Institute of Technology GmbH
2. FH OÖ Forschungs & Entwicklungs GmbH
3. Montanuniversität Leoben: Lehrstuhl für Nichteisenmetallurgie + Lehrstuhl für Umformtechnik
4. RECENDT GmbH
5. RISC Software GmbH

Selected international¹ partners (max. 5):

1. Albert Handtmann Metallgusswerk GmbH & Co KG
2. iba AG
3. MAGMA Gießereitechnologie GmbH

Duration: 01.01.2024 - 31.12.2027 (4 years)

Staff employment: 56,33 FTE, thereof 50,96 scientists

Management: **Dr. Carina Schlögl**, Senior Research Engineer
Dipl. Ing. Dr. Johannes Österreicher, Senior Scientist

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¹ Partners with headquarters outside Austria