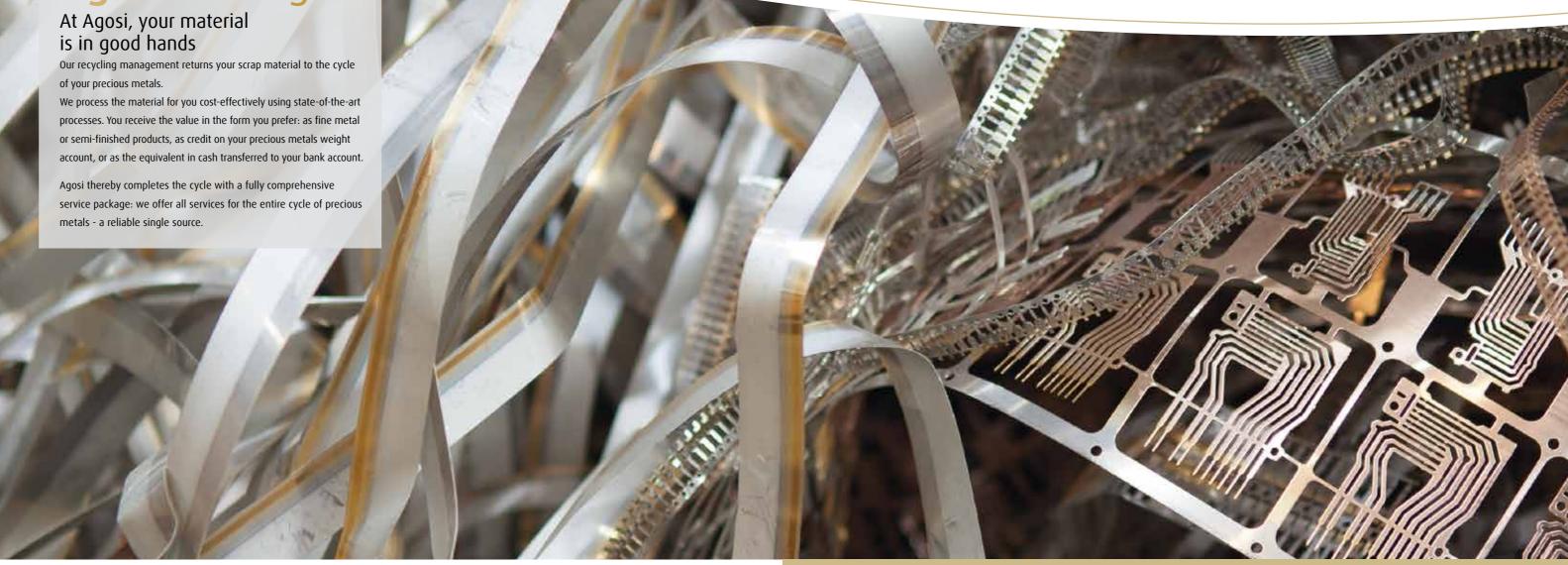


## AgosiRefining



Allgemeine Gold- und Silberscheideanstalt AG is part of Umicore, Brussels, a global materials technology group. It focuses on application areas where its expertise in materials science, chemistry and metallurgy makes a real difference. Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life. Its social commitment and innovative environmental approach have earned Umicore worldwide recognition; the corporation is among the "World's Most Ethical Companies" (Etisphere 2012). www.umicore.com





With its subsidiaries in Austria, The Netherlands, Switzerland, Thailand, North and South America, Agosi represents the core of the Umicore Business Unit Jewellery and Industrial Metals. It provides a closed-loop concept of precious metals services, products and refining for the precious metals consuming industries. At its RJC-CoC certified sites in Pforzheim and Thailand, Agosi can offer CoC-conform, responsibly produced gold of conflict-free and certified origin. www.agosi.de

The current General Terms and Conditions apply.

Printed on 100% recycled paper



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## Precious metals refining

Industrial scraps

# We process your industrial residues

There is a large variety of materials containing precious metals. At Agosi, we consider carefully the best way to process your materials depending on their composition and characteristics. Here are some examples of the material categories we at Agosi are able to process for you:

### >> Low grade material :

Scraps coated with precious metals, stamping scraps, electronic scraps

- Sweeps : Sludge containing precious metals filters.
- >> Chemical separation procedure : Silver solders, AgSn0, AgNi and AgCd0
- Silver scraps : Silver chloride, wires, silver electrolyte, industrial residues containing silve
- Gold scraps : Gold electrolyte, cathodes and catalysts
- >> PGM material :

Thermocouples, material residues from thin-film deposition technologies, Pt/Pd catalyst

>> Fluids :

Solutions containing precious metals, electroplating baths and salts

We will find the most economical way of processing your residues. If required, our base metals division can buy the material directly from you. We will be happy to give you individual advice on the best way to process your scrap materials.



### Different procedures – from a single source

Industrial scraps form a large part of the materials processed at Agosi. The apparatus and processes involved are as follows:

- >> rotary furnaces for volumes of 3t or 5t
- >> furnaces for sweeps
- >> crucible furnaces for volumes of 150 kg or 600 kg
- >> Moebius and Dietzel electrolysis
- >> bath processing (electroplating bath processing)
- >> hydrometallurgy

As one of the largest refineries in Europe, we can offer you a broad range of processes at our plant in Pforzheim, Germany from sampling to analysis to fine metal refining. For you, this means you have one contact for all your requirements concerning the refining of your precious metals.

### Individual advice

We aim to make the recovery of your precious metals as efficient as possible. We would be happy to give you individual advice at your premises about possibilities to optimize your dealings with scraps and about their collection and transportation.

Together with you, our customer, Agosi experts will inspect your precious metals bearing materials and will make recommendations on the basis of your particular requirements. Together we will explore how best to sort the materials into cost-effective batch sizes and at what intervals they should be delivered to us.

### Transport and Collection

In order to ensure the safe delivery of your material, we can provide you with a variety of containers for the transport depending on your requirements. We are also happy to collect your scraps at your premises. Please call us or send your requirements.

Drums are suitable for smaller material quantities, e.g. sweeps (volume approx. 50 litres) We can provide you with IBCs for baths and solutions (volume approx. 500 litres)





Large and bulky scraps such as stamping scraps can be transported in iron barred boxes (volume approx. 500 litres)

### **Agosi**BaseMetalServices

Agosi's Base Metal Services division is well equipped to turn valuable production scraps out of non-ferrous metals, steel and stainless steel back into high-quality raw products. We offer the complete recovery cycle starting with stamping scraps right through to materials for production and deliver high-quality base metal semi-finished products as strips, sheets, cuttings and wires and as crude and alloying metals - a wide range of materials, combined with recycling methods that are environmentally sound whilst maintaining high values.

Our Base Metals Services division is also certified as a waste management company. Modern recycling management means not only fast and flexible waste management services but also a processing system that is appropriate for the materials and that ensures sustainable recycling. This is all the more important since the base metals market is experiencing a significant increase in the prices for raw materials.

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