

The Fifth Assaying & Refining Seminar

Continuous Casting of Silver Bars

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London 11th March 2013





Allgemeine Gold und Silberscheideanstalt AG

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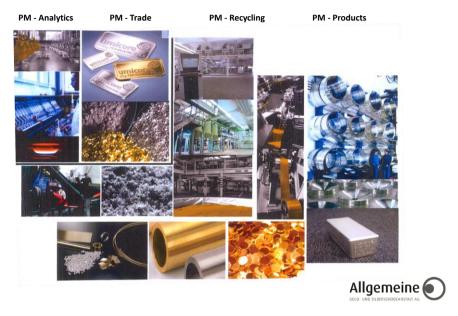
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Part of the Umicore group LBMA accredited since 2008

Activities and product range





Allgemeine & Umicore Core Business







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Process - Premelting, assaying and casting



- After homogenization, sampling and analyzing with spark analyzer in 10 min during the process 25 possible impurities and oxygen content
- Approval or stoppage of the furnace
- · Transfer of silver in casting furnace





Process - Casting



- Analyzing after transfer each new 500 kg batch from the pre-melting furnace, spark analyzer process control and final analyze
- Secondary cooling unit

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Process - Cutting







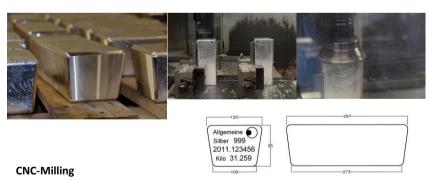
Cutting

- In-line-cutting of the endless bar in pieces, 305 mm long
- Packed in 500 kg batches correspondent to one premelting furnace transfer to the other



Process - Milling





- To produce the undercut on the ends of bars and round the edges
- Dry milling without any contamination
- Process time: 5 min/2 bars
- Amount of chips: 7%
- Chips can be returned

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Process - Weighing, Marking and Packaging







Weighing, Marking and Packaging

- Pair of scales and computer supported programmable dot matrix engraving system are directly connected
- Bar weight is copied to the engraving system
- Generating automatic weighing list
- Packaging for transport Special effort due to the extremely flat surfaces





Conclusion



- 3 months from Idea to the accreditation
- Using the Production capabilities and the well trained staff
- Production in 9999 and 999 quality without any visible differences



- Highly visible quality, independent from different rest impurities in refined silver
- Direct use of electrolytically recycled (washed and dried) silver crystals
- Efficient alternative for Allgemeine
- In December 2012 we celebrated the 10,000th continuous cast Silver bar
- Many thanks to LBMA, the Physical committee and Chief Executive Stewart Murray for their support









