

Good Delivery bar casting technologies and related challenges and critical aspects - How advanced solutions can overcome these challenges

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Over the years, LBMA Assay & Refining conferences have been the opportunity to share technological advancement and ideas related to precious metals refining.

Technology evolves over time sometimes in disrupting ways and sometimes in incremental ones and our industry must be ready for the challenges.

This paper will provide the latest technological updates on bar casting process and the positive impact on safety and productivity.

Good Delivery bar casting is a deceptively simple operation. The reality behind a consistent good quality cast bar includes knowledge about metallurgy and a great deal of workmanship skill.

The basic metallurgy is well-known and different casting methods are used, in accordance to traditional practices and in compliance with LBMA rules.

Despite casting a Good Delivery bar is an operation done thousand times, it's still very dependent of individual skills.

This is a critical aspect in a world of uncertainty, where, due to the current COVID-19 pandemic, consistent availability of skilled labour to maintain production throughput may be at risk.

Modern technology can automate the operation, avoiding inconsistent quality linked to manual operations, improving productivity, safety and reducing energy consumption. Skills are therefore moving from manual operations to equipment supervision.

This paper will present an overview on the most common Good Delivery bar casting technologies and related challenges and critical aspects as well as advanced solutions to overcome these challenges, maintaining compliance with LBMA GD rules and best practice in terms of safety and energy savings.