

Stabilisation of the coating process by integrating density measurement into a combination of dipping and flow tanks

INNOVATION & TECHNOLOGY

THE CHALLENGE

The desire of the iron and steel foundry Silbitz to improve core shop quality without reducing productivity was the main challenge. The old conventional dip tank was manually operated, hence large variations in coating density were observed resulting in not acceptable coating layer thickness variation. The process was unstable and as a consequence cost and time of intense rework were required.

FOUNDRY:

The Silbitz Guss GmbH is the oldest and largest site of the Silbitz Group. The foundry is a classic jobbing foundry and offers customers a broad spectrum of services in the iron casting, steel casting and stainless steel casting segment. Silbitz manufactures, among others, cast parts for wind power, drive engineering, machine tools, construction/mining machines and railway technology.

PARAMETER

Alloy: GGS
Coremaking: Cold box
Casting weight: 10 - 1,200kg
Casting temp.: 1,350-1,420°C
Pouring weight: max. 5 tonnes
Moulding process: Green Sand + Furane Sand
Green Sand 10-400 kg
Furan Sand 400-5.000 kg

FOSECO PRODUCTS

ICU-I – Integrated ICU
SEMCO* Sil 3544 CH coating
TENOX* Tec 7802 D coating
STYROMOL* 300 E coating
SEDEX* filter
FEEDEX* sleeves
POLITEC coldbox binder
FUROTEC furane binder
CATASET furane binder
UNIROD stopper

OUR SOLUTION

We worked together with the customer to supply a solution that was tailor-made. First, all process steps - from design and construction to installation - were jointly planned and carried out. The result: The ICU (Intelligent Coating Unit) integrated in the dip tank, an adapted combination of dipping and flow tank for all core sizes.

KEY BENEFITS

- Combination of dipping and flowing in one unit
- Automation and control of the coating adjustment
- Reduction of coating related casting defects
- Facilitation of handling

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THE OUTCOME

By using the ICU with flow tank, it was possible to stabilise the coating process, relieve the workload of the employees and significantly reduce rework - and thus also increase the performance of the foundry. In this case, the use of the ICU already paid off within the first year, as savings in the area of scrap and coating cost were approx. € 100,000.

ICU with integrated dipping tank



THINK BEYOND. SHAPE THE FUTURE.



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