

Insertec DIGITAL SERVICES

Enhancing Control, Safety, and Efficiency

**LVL02 **

02 Level

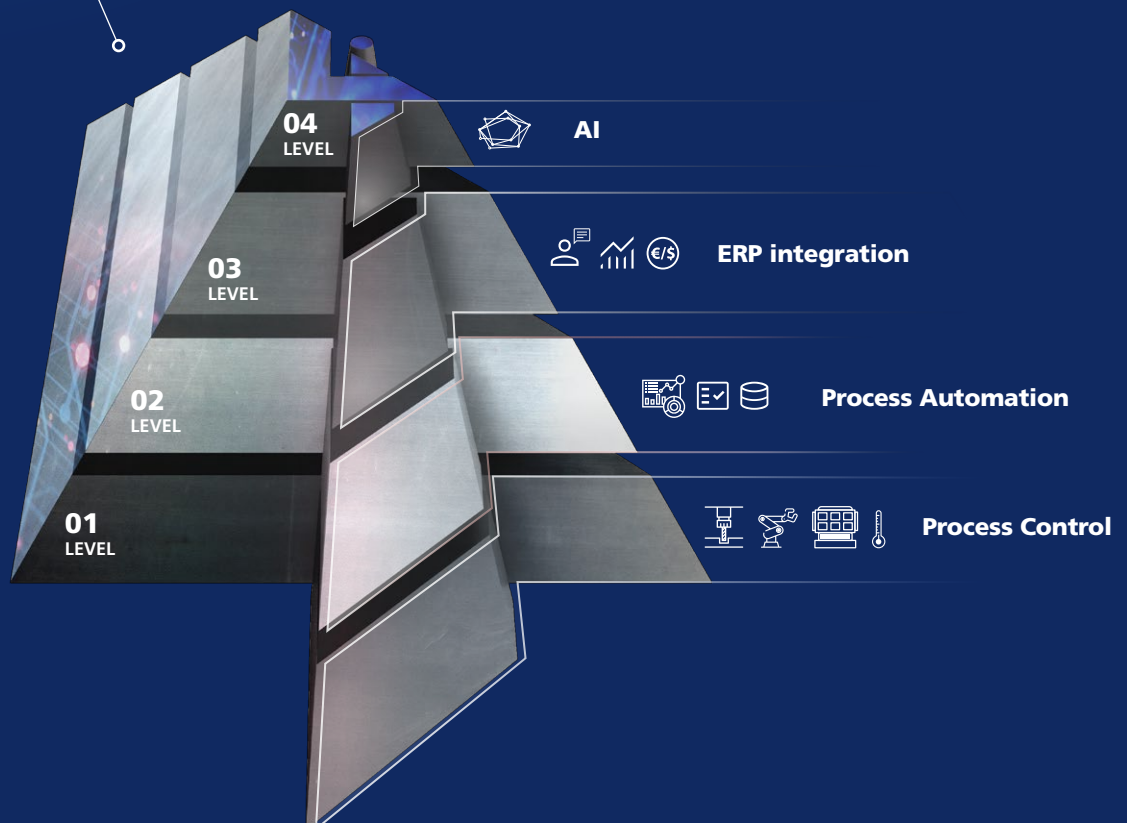
insertec
Furnaces & Refractories



Enhancing Control, Safety, and Efficiency

Knowledge-Driven Dynamic Operations

PLANT LEVEL
COMMUNICATIONS



Objectives \

Process optimisation

Automation and integral control of production for greater efficiency and product quality.

Informed decision making

Real-time access to accurate data for strategic and agile decision-making.

Regulatory compliance

Security and full traceability to comply with regulations and industry standards

Improved resource management

Efficient resource assignment, minimising costs and maximising asset utilisation.

Increased competitiveness

Continuous improvement and operational agility to stay competitive in a dynamic business environment.

Flexibility and adaptability

Scalability and customisation to adapt to changing business and market needs.

Main areas of application \

Planning:

Resource management and comprehensive control of the production process. Decision making during planning.

Reporting:

Generates documentation to quickly understand the performance of the plant and of each production order.

Monitoring:

Possibility to monitor the status of each piece of equipment in real time.

Historical Logging:

Detailed record of each process situation for further analysis and improvement.

Predictive Maintenance:

Predict and prevent failures before they occur to minimise downtime.

Incident Management:

Efficient recording and tracking of any production incidents.

Laboratory Analysis:

Integration of laboratory analysis results to ensure product quality.

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Efficient management from reception to storage \

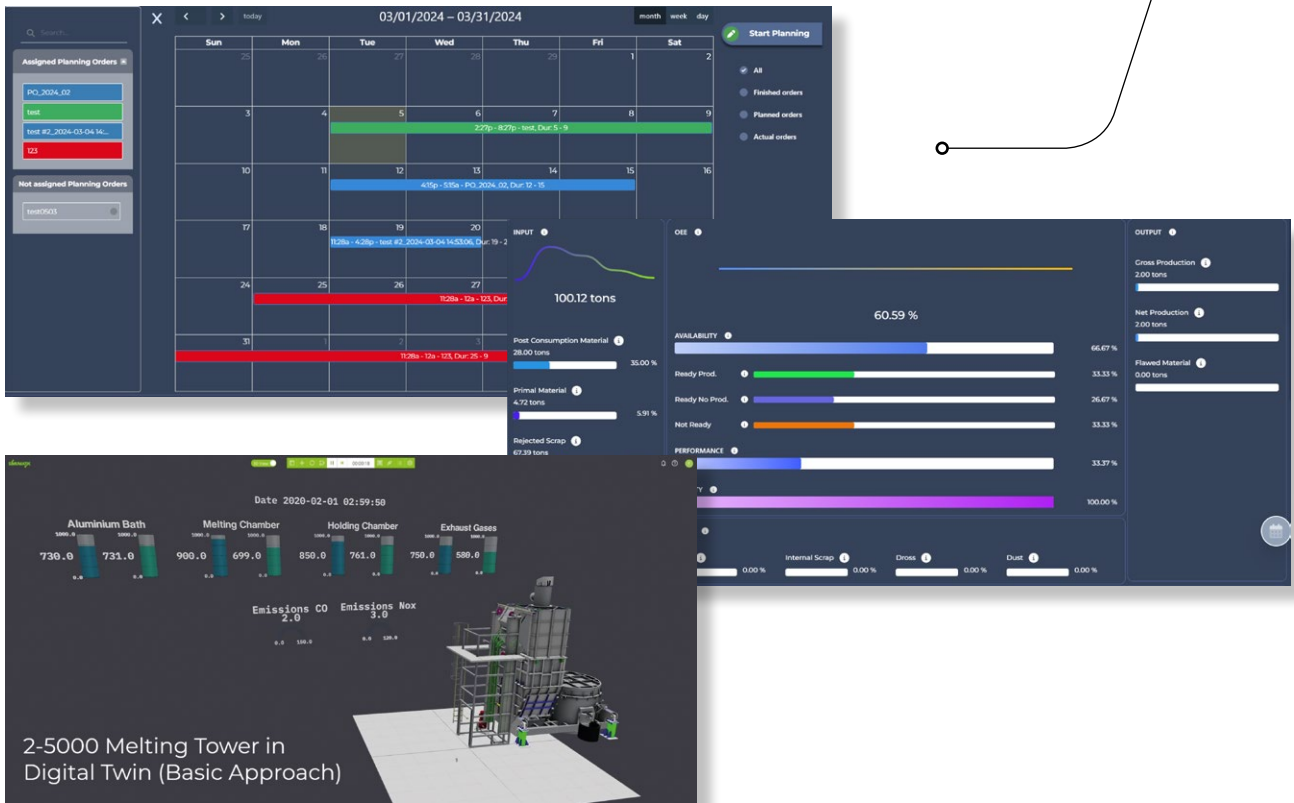
From the reception of aluminum material to the storage of the final product, each step of the process is efficiently managed within LVL02, guaranteeing quality and efficiency in aluminum casting.

- **Material reception:** Receiving, classifying, and storing raw materials for further processing.
- **Pretreatment:** Adapting, cleaning, and removing impurities from the raw material to process it in the melting zone.
- **Melting:** Transformation of pretreated materials into liquid metal at high temperatures.
- **Casting:** Control of the solidification and molding of the liquid metal into products with specific geometries.
- **Homogenization:** Heat treatment to ensure a uniform structure and optimal mechanical properties.
- **Storage:** Management of finished or semi-finished product stocks for distribution or further processing.

Production Management \

Centralizing the power of production management for efficiency and dynamic adaptability in the manufacturing environment.

- **Advanced Automation:** Introduction and automated management of manufacturing orders to optimize production planning.
- **Time and Delay Management:** Real-time monitoring for agile response to deviations, ensuring maximum operational efficiency.
- **Minimization of Errors:** Significant reduction of human errors and possible interruptions, thanks to the precision of automation.
- **Adaptability to Changes:** Ability to quickly adjust production priorities in the face of fluctuating demands or unforeseen situations.
- **Centralized Control:** Exclusive management by an authorized individual, guaranteeing coherence and security in decision-making.



Maximizing productivity with OEE \

The system allows analyzing the process at various levels. Analyzing the performance and availability of the plant, area, or even focusing on each of the equipment.

- **Total Visibility:** Identifies where and how efficiency is lost.
- **Continuous Improvement:** Directs efforts towards the greatest optimization opportunities.
- **Excellence Benchmark:** Establishes a standard for comparing performance between teams, shifts, and plants.

User Management \

The system allows analyzing the process at various levels. Analyzing the performance and availability of the plant, area, or even focusing on each of the equipment.

The system allows creating and adjusting different types of roles for registered users. It defines what actions users can perform within. It records all actions performed by users, allowing detailed tracking and efficiency analysis. And it offers user interfaces.

- **Increased Productivity:** Fast and secure access to relevant information and functions reduces downtime and increases operator efficiency.
- **Compliance and Security:** Strengthens data security and ensures compliance with international standards and regulations.
- **Data -Driven Decisions:** Facilitates more informed decision making by providing each user with the right information at the right time.



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