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BSE-EAF –Future-proof Melting. Automated System for safe, reliable & efficient operation

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Badische Stahl-Engineering GmbH (BSE) is one of the world leading engineering & consulting companies belonging to the RSE-Group (Reinforcing Steel Europe B.V.) with its own steel plant Badische Stahlwerke GmbH (BSW) both located in Kehl/Germany

Based on over 40 years of engineering, and even longer operational, experience & competence in the field of EAF-technology, BSE developed and provides its own unique EAF design and process technologies.

Key features and characteristics of the BSE-EAF are:

- Overall robust and reliable design of EAF-sections
- Well sized hydraulic system for safe and fast EAF motions
- Space saving gantry design
- Precise calculation and simulation of electrical power input system
- Reliable and efficient chemical energy system
- Customized shell dimensioning for given charge materials
- Modular equipment for quick change and safe maintenance

Beside all operational aspects of the design, also reliability and maintainability of the system sections are reflected in the design.

Currently BSE focused on developments to enable more and more automated and safe operation of EAFs. Key technologies in these field are:

- Safe-cooled roof by using spray-cooling
- Smart leakage detection for closed circuit cooling systems
- Safe-EBT with TapHoleManipulator and EBT-Sandman
- DoorMan for automatic sill cleaning and closed door operation
- Automated Sampling & Temperature measuring system with automatic cartridge changing by MultiRob
- Visual EAF-shell inspection by HD and HD-infrared cameras

The paper will show the technological background of the mentioned features and characteristics. Furthermore realized installations will be shown for better explanation and a outlook of the current development activities will be given.

Speaker Country

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