

BSE Chemical Energy
BSE Measurement and Control Technology

Lance Manipulator LM.2

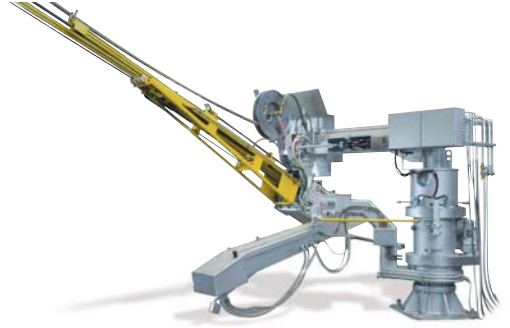


BSE

BADISCHE STAHL-ENGINEERING GMBH

Excellence in Steelmaking

**LM.2 – Injection *and* measurement
with just one single unit:**



The compact two-in-one- solution by BSE.

BSE's Multi Lance Manipulator and the TempSamp Manipulator are amongst the most successful innovations ever in EAF technology. BSE introduces the second generation of its successful LM.2 which combines slag-door-injection and measurement in one compact single unit – and now comes with even more convincing advantages!

If you've got no space to waste in front of your EAF, BSE's LM.2 is the ideal choice!



*Sampling/
measurement
lance*

*Injection
lances*



Principles.

- Injection of oxygen, carbon, lime or other solid materials into the EAF with independent moving lances in one common or two separate heads.
- Substitution of electrical energy by chemical energy.
- Design based on operational experience of own steel plant BSW.
- Highly effective consumable lances.
- Optimal height adjustment for different process stages.



Injection and sampling with individually moving lances placed on one solid column, height of which is hydraulically controlled.

Applications.

- Especially on locations with reduced space in front of the EAF the LM.2 shows its advantages: just one device instead of two for injection and measurement saves a lot of space – without touching the performance!
- The LM.2 is the solution of choice for smaller size EAF's as for the "big ones" alike – when combined with BSE's chemical energy concept.
- Wide range of metallurgical applications such as
 - decarburisation
 - desoxidisation by carbon
 - foaming slag
 - horizontal stirring of steel bath



Easily accessible drive and cooling components for maximum power, reliability and convenient maintenance.



The quick snap-on coupling system – higher lance force, easy and fast lance exchange.

Advantages.

- Increase of oxygen efficiency and productivity.
- Reliable injection as a result of appropriate actuation technology.
- Remote control from the operator room for maximum safety and good, motivating work conditions.
- Safe operation due to heat protection of relevant parts.
- Reduction of Tap-to-Tap time due to measuring without interruption of the furnace operation – and foaming slag practice as well!
- Accurate and reproducible measuring and sample taking.
- Quick and easy maintenance (e.g. good accessibility of relevant parts).
- Attractive cost/performance ratio for a quick return on investment.



Everything under control: valve rack and control desk.

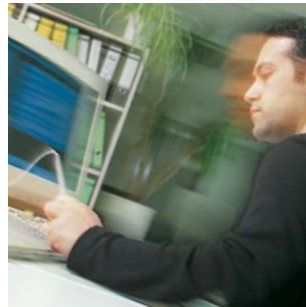
BSE: the Steelmaking Excellence Network.

BSE is at the center of a world-wide active partnership that is driven by a common goal: to help steelmakers all around the globe in doing their good job even better. From raw material procurement to product portfolio and market analysis, from staff and management training and consulting to the most advanced EAF steel production soft- and hardware – the BSE Competence Network covers it all. Find out for yourself what BSE can do for YOUR excellence in steelmaking!

- **BSE consulting and training**
- **BSE concepts for chemical energy input**
- **BSE measurement and control solutions**
- **EAF, LF and CCM modernisation by BSE**
- **BSE environmental services**



Kehl/Rhine, Germany: aerial view on one of the world's most successful EAF steel plants.



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