

### SSB SMP2 revamping project:

SSB is operating in their SMP2 plant a DC twin shell EAF with 90t tapping weight. The EAF was originally designed by ABB with a double upper shell for an optimized energy input.

Middle of 2003 SSB was asking BSE to make an on site investigation at their SMP2 plant for defining a concept for future developments in optimizing the electrical & chemical power input and to look into the necessary modifications with respect to a future quality steel grade production:

Operation patterns for

- the burner and LM operation,
- the twin shell operation with optimized pre-heating phases and
- optimized electrical power input

have been investigated and developed.

Equipment modifications to

- upper shell,
- lower shell,
- furnace roof
- alloy adding system and
- tilting platform

have been investigated and possible design options have been pointed out.



Both, operational and equipment items, have been counter checked on the economical and investment issues leading to an increase in productivity, considerable savings of operating costs and a reasonable pay back time.

The contract for realizing the modifications to the SMP 2 plant has been given to BSE in early 2004.

The engineering was finished in the second quarter of 2004, the equipment was manufactured locally and in Germany.

The EAF stoppage was planned on November 10. 2004 for 18 days.

The equipment has been pre-assembled and tested before the on site prior to the shut down.

A local sub contractor was nominated by SSB for the installation work under the supervision of BSE personnel.

Both complete EAF shells (lower, upper shell, roof and elbow) have been taken out and replaced. The bottom

electrode bus bars have been modified to meet the new lower shell bottom level.

The tilting platforms have been modified in order to improve the view into the ladle during tapping. In order to optimize the EAF volume, the upper shell height has been reduced and the entire roof lifting structure and electrode gantry has been lowered down respectively.

The EAF was back in operation on November 30. 2004 after 3 weeks of stoppage.

The commissioning and start up was made under supervision of BSE. Already within the first weeks after the re-start of the EAF a stable operation has been established and production records have been achieved.

