

## “We will do our utmost to make Jianbang a Chinese BSW within 3 years”

Comprehensive consulting agreement with Shanxi Jianbang group (China)

This quote by Mr Liu Liqiang (Jianbang deputy general manager), said at the BSE steelmaking seminar in China in May 2012, shows best the willingness to implement the “Badische philosophy” to Jianbang’s converter, rolling mill and wire processing at the steelmaking facilities in Houma (Shanxi province). In October 2010, a three-year agreement for consulting services was signed between BSE and Shanxi Jianbang group. Beside implementation of the “Badische philosophy” and general know-how exchange, the project also involved the installation of a Delay Recording System for process optimisation as well as specific support for the creation of a new education and training centre.

### THE PROJECT

Efficiency at highest quality standards is achieved when highly reliable state-of-the-art technology meets a skilled and motivated workforce to produce exactly what the market needs. To systematically implement this “Badische philosophy” the agreement comprised beside general know-how exchange for a period of three years the following steps, which were all executed in 2011:

- ⊙ On-site investigation
- ⊙ Management seminar and operation / maintenance seminars at BSE / BSW with a total amount of 59 participants
- ⊙ Operation / maintenance training on site



Jianbang seminar participants visiting BSW steel plant

### DELAY RECORDING SYSTEM

In the course of the common project Jianbang decided to also implement the BSE Delay Recording System (DRS) for the converter operation.

DRS is a process analysis system that is operated by the melter at the furnace. Based on automatically generated statistics and heat reports the management is then able to evaluate the data and derive measures for process optimisation.

The pre-definition / programming of the delay codes were jointly done by Jianbang and BSE engineers, taking into consideration the specific process and site conditions at Jianbang. Furthermore, a special training was conducted at BSE and Jianbang to make the designated users familiar with the new system.

Although the DRS at Jianbang is the first of its kind for converter operation in China, the results have been very satisfying. Since its installation the DRS has been helping a lot in decision making for process optimisation.



Training by BSE experts about DRS handling at Jianbang



Touch screen at the operator pulpit for entering of a specific delay code by Jianbang operators



每炉报表		
概况		
炉号: 11010599	生产日: 28.10.2011	
开始: 28.10.2011 14:21:13	结束: 28.10.2011 14:49:09	班别: 丙班
目标时间[分钟]: 30.67 / 27.93	煤气消耗 [Nm <sup>3</sup> ]: 3744	煤气消耗 [Nm <sup>3</sup> ]: 684
总误工 [分钟]: 0.99		
时间		
目标时间 [分钟]	总时间 [分钟]	误工 [分钟]
准备	2.00	1.65
加废钢或加铁水	2.67	2.65
吹氧准备	0.50	1.00
吹氧	15.00	15.47
吹氧结束	0.50	0.47
测温取样	1.50	0.53

Documentation of registered delays allowing for process optimisation by Jianbang management

See next page for project results and information about training centre

## TRAINING CENTRE

In order to secure future success in steelmaking, young steelmakers have to be selected, educated and trained effectively. Based on observations made at BAG (the special company within the Badische group that is dedicated to train new apprentices in different professions) and recommendations of BSE, Jianbang has successfully developed and established an own education and training centre featuring key functions such as:

- ⊙ Cooperation with public schools and inner part technicians to fulfil the vocational school function.
- ⊙ Acquisition of external know-how by learning from observations at Badische group and inviting professors and BSE experts to give on-site lectures.
- ⊙ Evaluation of individual skill level and deduction of internal training measures for employees
- ⊙ Execution of three level training program for new employees and apprentices: basic education on steelmaking theory and company philosophy, technical education in workshops and work experience by actually working on shift
- ⊙ Execution of specific manufacturing and research tasks for the group



Badische group training centre in Germany and new building of Jianbang training centre



Classroom training as one part of the education program



Successful graduates of the education program

## RESULTS / BENEFITS

The concrete measures derived from the organisational and technical recommendations by BSE have been compiled and coordinated by a special Jianbang project team. The actual execution of these measures has effectuated a significant improvement of safety and site working conditions, an increase of productivity (e.g. machine hour output, hot charging ratio) and a decrease of production cost.

Since the start of the cooperation end of 2010, 90% out of more than 100 designated measures have been implemented and have already resulted in an annual benefit of more than 20 million CNY. Therefore, it truly can be said that the cooperation with BSE and the implementation of the "Badische philosophy" has already paid off for Jianbang!



The "Badische philosophy": implemented and carved in stone at Jianbang

Contact:  
 e-mail [wucheng.zhang@bse-kehl.de](mailto:wucheng.zhang@bse-kehl.de)  
 Phone ++86 13600073793