Successful steelmaking starts at the scrap yard – with a proper scrap yard layout and management

Logistic study at NatSteel Recycling Pte Ltd. (Singapore) and success factors of BSW scrap yard management

Logistics is a never-ending story in general – and since raw material costs represent the largest single cost factor in mini-mill operations, in particular an efficient scrap handling and appropriate layout of the scrap yard are major success factors. Based on the experience of the daily operation and continuous optimisation of its own scrap yard at BSW mini-mill in Germany, BSE / BSW have been assisting to develop solutions and layouts for scrap yards for many different plants all over the world.

Logistic study at NatSteel

NatSteel aimed to improve the logistic conditions and reduce handling costs at the scrap yard area at their plant in Singapore. Presently, NatSteel runs two outside scrap yards and one inside scrap bay. At the outside yards, the scrap is prepared, stored and transported to the inside bay, where the buckets are loaded for the 90 tons shaft furnace.

The logistic study with BSE should analyse and determine the best location and layout for one new combined scrap yard (replacing the existing facilities) for storage, preparation and bucket loading.

The study comprised an on-site investigation at NatSteel, a common workshop at BSE, a material flow simulation and a final report considering two alternative solutions for the future scrap yard layout.

The detailed descriptions of these options, together with a list of required equipment for the scrap yard and a rough calculation of investment and handling costs, provided NatSteel with a solid base for current and future decision making in the field of scrap yard logistics.

BSW scrap yard management success factors

BSW scrap yard management has always been an integral part of the Badische philosophy, featuring highest productivity, availability, process standardisation and the importance of the „human factor“:

- Optimal transport and logistic management, e.g. avoidance of double handling (90% direct loading from waggon to bucket, 65% direct loading from barge to bucket) or cycle time of about 25 minutes from scrap bucket loading to charging into the furnace.
- Active scrap stock policy, e.g. combination of internal operative scrap yard (capacity for one week of production) and external spare scrap yard ensures scrap availability 24/7.
- Elaborated maintenance strategy, e.g. high rate of in-sourced maintenance enables a fast problem solving. Furthermore, a mixture between condition-based and purely preventive maintenance strategy leads to low crane downtimes.
- Stringent scrap quality philosophy, e.g. strict scrap control increases efficiency and security.
- Adherence to well-designed and standardised scrap programme, e.g. standardised recipes for bucket loading according to steel quality produced.
- Activating working atmosphere, e.g. air-conditioned crane cabins.
- Well educated and trained employees, e.g. all of BSW’s scrap crane drivers are also trained as scrap inspectors, so they understand the work and are able to support the scrap yard people on the ground.
We are Steelmakers!

BSW and BSE – a unique partnership that will help you to reach even ambitious goals.

Since 1983, the Badische Stahl-Engineering GmbH (BSE) has been acting as a service provider for increasing the efficiency and productivity in the electric steel industry worldwide.

BSE is a sister company of the Badische Stahlwerke GmbH (BSW), one of the world’s most efficient Electric Arc Furnace steel plants.

This unique partnership between BSW and BSE ensures that all products and services provided by BSE are not just based on mere theory, but on more than 4 decades of own proven operational experience.

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