

METAL WORKING INDUSTRY

INNOVATIVE TIMED PRODUCTION LINE
REDUCES MATERIAL LOSS

The timed production line: from uncoiling (l.) to powder coating (r.)

IDEALSPATEN produces spades in a “timed” way and ensures not only a reduction of material consumption, but also to offers competitive “Made in Germany” products in the medium and low price segment.

THE COMPANY



ADDRESS

Idealspaten Bredt
GmbH & Co. KG
Goethestrasse 27
58313 Herdecke

INTERNET

www.idealspaten.de

ESTABLISHED

1899

LINE OF BUSINESS

Production of tools for construction and gardening purposes

EMPLOYEES

approx. 80

INITIAL SITUATION

The company IDEALSPATEN has been producing high quality hand tools such as shovels, spades pitchforks and pickaxes for the construction and gardening industry on the Herdecke site for more than 100 years.

In order to additionally cover the medium and low price segment of the DIY stores, the company imported spade blades from Southeast Asia which were finally processed in Germany.

Due to increased costs and existing quality problems regarding the purchased spade blades, IDEALSPATEN decided in 2010 to re-establish their own production for this segment in Germany.

In order to be able to produce within all price segments competitively, the company developed a material and energy efficient concept which was industrially used in this way for the very first time.

Saving resources. Strengthening the economy.

MEASURES AND ADVANTAGES

The core of the new timed production is the interconnection of all process steps – from uncoiling to the punch and bending process up to the powder coating of spade blades – all in one line. Thus, the cost-intensive internal logistics between the individual steps are no longer required which leads to a considerable reduction of the processing time.

In order to reduce the material and the energy consumption in production, IDEALSPATEN has additionally enhanced the resource efficiency of the individual process steps: e.g., an optimized punch processor of the board reduces steel scrap significantly and the heat treatment is done through accurate induction. Also, process steps such as quenching and hardening of the spade blanks are combined in one process step in the timed production line.

A measuring programme carried out by the consultancy Saller GmbH and the Effizienz-Agentur NRW prior to commissioning the plant proved that the anticipated savings were even exceeded. For example, the company

reduced the required amount of steel by 22.7 percent which corresponds to savings of approx. 60 tons of steel a year. In conjunction with the energy savings during the heat treatment the CO₂ emissions resulting from the spade production also went down by 26 percent.

The timed production serves as a best practice model: the process can be transferred to all punching-bending shops where the produced parts must undergo heat treatment.



The spades "Made in Germany", which are produced with the new line, are supplied to DIY stores and garden centres in particular.

RESOURCE EFFECTS AT A GLANCE

Reduction of material losses (steel)	approx. 60 t/a
Reduction of CO ₂ emissions	approx. 115 t/a

THE WAY TO FINANCING

In 2010 IDEALSPATEN contacted the financial consulting of the Effizienz-Agentur in North Rhine-Westphalia. In cooperation with the engineering office Saller GmbH, a project sketch for the environmental innovation programme of the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety was drawn

up. After the approval of grants from the environmental innovation programme worth approx. € 241,000, both EFA and the Saller GmbH were assigned with the transaction of the grants at the beginning of 2011. In October 2013 the project was completed. IDEALSPATEN invested approx. € 1.5 million in total in the new production line.

The project partner

EFFIZIENZ AGENTUR NRW

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