



Global Cement staff

## HARDTOP - New headquarters hosts open day in Magdeburg

HARDTOP Giessereitechnologie GmbH was established in September 1997 as an engineering company in Magdeburg, Germany, a location with a rich tradition of machinery manufacturing. The development of innovative, tailor-made wear-part solutions for each specific application is the company's foundation. *Global Cement* attended HARDTOP's Open Day on 15 May 2014, held at the company's stylishly renovated 1900-built headquarters in Magdeburg, Germany. The occasion brought together around 50 guests from Germany and the rest of the world.



On 15 May 2014 a cast of 50 converged on HARDTOP's Open Day, which was organised by proprietors Dr Armin Issleib and Dipl-Ing Irina Issleib-Lubojanski. The occasion was to celebrate the company's new, stylishly-designed headquarters in Reichelstrasse, Magdeburg, Germany, which is accommodated within the 1900-built residence. The weather 'played ball' on the day, so that the roof terrace was an ideal place to discuss aspects of wear solutions and markets in the cement industry with guests, many of whom had travelled from far to attend.

company has accomplished high levels of competence both on the domestic as well as international markets. The constantly increasing requirement for Hardtop bi-metallic parts in the marketplace gave rise to the decision eight years ago to systematically increase production capacity.

This permits a broad range of material combinations, a wide spectrum of individual weights in combination with highly-specialised heat-treatment know how. The company can thus satisfy a multitude of customer needs and specialities, both at short notice and flexibly, by applying various mould and casting technologies.

To satisfy future market demands, secure market share and to address new business areas, a new innovative service has been implemented by the company. New market segments and areas of application are now being addressed by HARDTOP, particularly in the field of special materials and combined production processes. With this in mind, complex, specific technical investigations, analyses and calculations were necessary. In addition to specialist and scientific knowledge enhancement among the company's personnel, this also required an expansion of the company's laboratory facilities which were commissioned since October 2013.

The basis for quality management at Hardtop in research, development and foundry technology is the DIN EN ISO 9001:2008 certification.

**Top:** The mansion where HARDTOP's headquarters is located.

**Above:** Detail inside the HARDTOP headquarters.

The company's activities encompass cast wear parts for abrasive wear in a wide range of sectors as well as solutions in composite materials. Its specialisation is in process technology with regards to energy and cost-efficient optimisation of wear parts utilising cast iron and steel materials.

As a consequence of this long-term developmental work targeting specific wear-part solutions, the

**Right:** The HARDTOP team. Left to right: Peter Schulz; Katja Lehmann; Grit Bismark; Chris Hofmann; Norbert Ludwig; Prof Dr Armin Issleib; Irina Issleib-Lubojanski.



**Right:** Senior staff and visitors take advantage of the good weather. Left to right: Prof Dr Issleib; Dr Stutterheim; Prof Dr Neubauer; Dr Kirchhof.





## Laboratory enhancements

Through the construction of its new laboratory, Hardtop's customers have been enjoying the following benefits:

- Expansion into new fields through the application of Hardtop bi-metal castings for new material combinations and special materials;
- Extended competences in the foundry, material and wear technology sectors;
- Enhanced structure and quality assessment;
- Compact scientific know-how transfer;
- Further product development to underline innovative capabilities;
- Development of technically-optimised process flows during application of special materials and combined production processes;
- Creating additional employment positions.

The goal, now achieved, is to process performance needs in conjunction with proven analytical methods for technical materials and additionally to offer third parties solutions in the form of ready-made products or samples.

## Material investigations

The laboratory which went live at the end of 2013 principally undertakes material investigations, which include:

- Structure analysis by reflective light, stereo-microscopy and microstructure evaluation;
- Digital image processing to ascertain type, form, size and distribution of components;
- Assessment of fracture samples;
- Stationary and/or mobile hardness testing (macro hardness testing);
- Surface crack examination (colour penetration test, magnetic particle testing);
- CAD-supported component analysis with Win Cast® Expert Finite Element Simulation software,
- Identifying the chemical composition of materials using spectral analysis.

## Additional services

Additional services approaching real manufacturing conditions and performed in the new facilities on behalf of third parties are also now implemented and comprise the following investigations:

- Material analysis;
- Improvement of material properties;
- Increase of component safety (component optimisation);
- Composite materials.

**Above left:** Glass ceiling in the sun-flooded atrium.

**Above centre:** In discussion. Left to right: N Ludwig; W Wegener; C Hofmann; Prof Dr Neubauer; Prof Dr Issleib.

**Above right:** General Manager Irina Issleib-Lubojanski is proud of HARDTOP products.

**Below left:** N Ludwig shows HARDTOP's global presence.

**Bottom left:** P Schulz explains HARDTOP's main sales markets

**Below centre:** Just a small sample of Hardtop's wear parts on display.

**Below right:** C Hofmann and K Lehmann in discussion.

**Bottom right:** G Bismark at her desk.

