

Press Release

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Market leader voestalpine underlines expertise in press-hardened steels

phs-directform®, the world novelty developed by voestalpine, is directly hot-formed, hot-dip galvanized steel strip for unique application in corrosion-resistant light-weight components for the automotive industry. After being awarded the National Prize for Innovation in 2015 for a most successful phs-ultraform® project, the Steel and Metal Forming divisions of voestalpine have summarized a wealth of information on the topic of press-hardening steels on a newly developed and comprehensive home page at www.voestalpine.com/thinkzinc.

As a technology group, voestalpine networks steel development, manufacturing and processing. The unsurpassed material expertise of the development specialists in the Steel Division is combined with the processing know-how of the forming specialists in the Metal Forming Division. Pioneering spirit and many years of innovation experience have led to unique expertise in the field of high-strength, corrosion-resistant hot-formed components.

phs-directform®, a novelty for customers worldwide

An experienced and innovative specialist in the hot forming of galvanized steel, voestalpine meets the most sophisticated challenges of the automotive industry: weight savings, excellent crash behavior and excellent corrosion protection. Now the innovation specialists at voestalpine have met the demands posed by the automotive industry for many years. The excellent corrosion protection offered by zinc can now also be applied to directly hot-formed components.

Direct hot forming is so economical, especially when producing low quantities. Based on many years of experience in the serial production of galvanized press-hardening steels, voestalpine has once again underscored its market leadership in this area. Today, phs-directform®, the world novelty developed by voestalpine, is directly hot-formed as hot-dip galvanized steel strip for corrosion-resistant, light-weight components

National Prize for Innovation for phs-ultraform®

Over the past few years, voestalpine has earned an international reputation in the production press-hardened components made of hot-dip galvanized strip steel (phs-ultraform®). The phs-ultraform® product combines light-weight design, corrosion protection and increased automotive safety. For the first time, voestalpine received the high honor as the most innovative Austrian company. The National Prize for Innovation was awarded to voestalpine by the Austrian Federal Ministry of Science, Research and Industry for successful innovation over the past few decades.

Most press-hardened components worldwide are manufactured using the direct hot-forming process. High-strength components with cathodic corrosion protection can now be manufactured using the direct process thanks to the phs-directform® innovation, and voestalpine is the only manufacturer capable of producing galvanized components in either the direct or indirect process.

In an indirect process, phs-ultraform® blanks are formed and cut using conventional cold-forming technologies. The cold-formed components are then heated for subsequent hardening and geometry finalization in hot condition. In the new direct process, blanks are heated and then

hardened in a cooled tool until final geometry is achieved. A key piece of equipment is the pre-cooling unit, in which the blank is cooled to approximately 550 °C prior to press-hardening.

Think zinc! perFORM HOT!

Important information pertaining to press-hardening steels has now been summarized by voestalpine on a comprehensive home page. Read more at www.thinkzinc.at about the new direct hot-forming process for steels with cathodic zinc protection and how voestalpine applies its expertise in a one-step-ahead approach. Information on the home page is updated on a regular basis with new facts and figures as well as white papers on the topic of hot forming.

www.voestalpine.com/thinkzinc
www.thinkzinc.at

Steel Division

The Steel Division is the largest division in the voestalpine Group and employs roughly 11,000 staff members. It produces high-quality flat-steel products, which is the core business of voestalpine. The Steel Division is one of the leading steel producers of Europe. We deliver to and consult customers in the automotive, construction, mechanical engineering, household-appliance, tube, section and energy industries. The portfolio of the Steel Division covers the entire range of high-quality steel strips: hot-rolled and cold-rolled, electrogalvanized, hot-dip galvanized, organic-coated. The following companies belong to the Steel Division: voestalpine Stahl GmbH, voestalpine Grobblech GmbH, voestalpine Gießerei Linz GmbH, voestalpine Stahl Service Center GmbH, voestalpine Texas LLC, voestalpine Eurostahl GmbH and Logistik Service GmbH.

Metal Forming Division

The Metal Forming Division in the voestalpine Group generated revenue of 2.3 billion euros and an operating result (EBITDA) of 331 million euros in the 2014/15 fiscal year. The division employs roughly 10,500 staff members and supplies almost all European automotive manufacturers. It is the center of competence in the voestalpine Group for sophisticated section, tube and precision-strip steel products and for ready-to-install system components made of pressed, punched and roll-formed parts. With an industry-unique combination of material and processing expertise and worldwide presence, the division is the partner of choice for innovative and quality-oriented customers.

The voestalpine Group

The globally active voestalpine Group is a steel-based technology and industrial-goods enterprise. voestalpine is represented by roughly 500 Group companies and locations in more than 50 countries on five continents. It has been listed on the Vienna Stock Exchange since 1995. With its highest-quality products, the Group is one of Europe's leading suppliers to the automotive, household-appliance and oil and gas industries worldwide. voestalpine is also the world market leader in switch technology and special rails, tool steel, and special sections. In the business year 2014/15, the Group generated revenue of 11.2 billion euros and an operating result (EBITDA) of 1.5 million euros. The Group today employs roughly 47,500 staff members worldwide.

We welcome your questions and comments

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