

The next generation of hot stamping now in series production: thyssenkrupp Steel shows AS Pro-coated MBW® steels for automotive construction at the EuroBLECH

- Component production in a reliable process: AS Pro coating minimizes process-related hydrogen absorption
- Milestone for automotive construction: ultra-high-strength hot-stamping steels in combination with AS Pro for weight-optimized and crash-relevant structural components
- Advantages of AS Pro: minimization of failure risks, component production in a reliable process, sustainable cost and energy savings
- thyssenkrupp Steel will be showing how AS Pro works, as well as the entire MBW® hot-stamping portfolio and other innovative steels, from 25 to 28 October at the EuroBLECH trade show in Hanover, Hall 17, booth E33

As a pioneer in hot stamping, thyssenkrupp Steel knows the challenges of the hot-stamping process. An answer to the risk of hydrogen-induced cracking in AS-coated manganese-boron steels is provided by AS Pro – an innovative development that ensures maximum component safety in vehicles. Now new in series production for all coated MBW® steels from 500 to 1,900 megapascals.

Optimizing for sustainable and economical processes

Reliable protection against scale is just one of the reasons why hot-stamping steels are aluminum-silicon coated. However, hydrogen can penetrate the material during heat treatment. Solving the problem through additional measures such as dew point control is

energy and time consuming. The new AS Pro coating significantly minimizes process-related hydrogen absorption during the annealing process, and results in a more economical manufacturing process.

25 October 2022

Page 2/3

"The hot forming process is taken to a whole new level with MBW® AS Pro. This shows that steel is the basis for sustainable component production in a reliable process, both now and in the future," says Georg Parma, Product Manager Hot Stamping at thyssenkrupp Steel, explaining the key advantages of the product.

Maximum safety with reduced costs

AS Pro is applied to the strip in the same way as a standard AS coating in thyssenkrupp Steel's modern hot-dip galvanizing lines. The special idea: a specific amount of magnesium is added to the molten metal bath, which is homogeneously distributed in the molten metal and coating. AS Pro then develops its effect in the annealing process. The test on series production equipment demonstrates that the hydrogen content in the component can be reduced by 40 percent or more after hot stamping. In the case of cold-rerolled steel, it is even possible to show a reduction of up to 70 percent. This is a groundbreaking development for hot stamping. In automotive construction in particular, hot-stamping steels in combination with AS Pro represent a milestone in the production of high-strength weight-optimized and crash-relevant structural components. AS Pro-coated steels show the same processing properties as the standard product: Whether laser welding, resistance spot welding or even painting, none of these processing steps require adjustments to the process.

The advantages of AS Pro at a glance:

- Minimization of process-related hydrogen absorption
- Minimization of failure risks
- Component production in a reliable process
- Processing properties at least comparable to standard AS
- Sustainable cost and energy savings

thyssenkrupp is looking forward to face-to-face encounters and stimulating industry discussions at EuroBLECH 2022. Visit the thyssenkrupp booth from 25 to 28 October 2022 in **Hall 17, booth E33**.

25 October 2022

Page 3/3

Contact:

thyssenkrupp Steel Europe AG

Public/Media Relations

Christine Launert

T: +49 203 52 - 47270

christine.launert@thyssenkrupp.com

www.thyssenkrupp-steel.com