

PRESS RELEASE – Steel industry releases fully updated AHSS Application Guidelines Version 7.0 *Guidelines are now available in an online database format*

21 September 2021 | Brussels, Belgium

The leading source for technical best practices on the forming and joining of Advanced High-Strength Steels (AHSS) for vehicle manufacture is released today by WorldAutoSteel, the automotive group of the World Steel Association. The AHSS Application Guidelines Version 7.0 is now online at ahssinsights.org in a searchable database, allowing users to pinpoint information critical to successful use of these amazingly capable steels. WorldAutoSteel makes these Guidelines freely available for use to the world’s automotive community at ahssinsights.org.

“More and more automakers are turning to AHSS to balance the needs for crashworthiness, lighter weight and lower emissions, while still manufacturing cars that are affordable,” says George Coates, Technical Director, WorldAutoSteel. “The AHSS Application Guidelines provides critical knowledge that will help users adapt their manufacturing environment to these evolving steels and understand processes and technologies that lead to efficient vehicle structures.” AHSS constitute as much as 70 percent of the steel content in vehicle structures today, according to automaker reports.

New grades of steel that are profiled in Version 7.0 show dramatically increased strength while achieving breakthrough formability, enabling applications and geometries that previously were not attainable.

“Steel’s low primary production emissions, now coupled with efficient fabrication methods, as well as a strong global recycling and reuse infrastructure all create a solid foundation upon which to pursue vehicle carbon neutrality,” notes Cees ten Broek, Director, WorldAutoSteel. “These Guidelines contain knowledge gleaned from global research and experience, including significant investment of our members who are the designers and manufacturers of these steels.”

Editors and authors Dr. Daniel Schaeffler, President Engineering Quality Solutions, Inc., for Metallurgy and Forming, and Menachem Kimchi, M.Sc., Assistant Professor – Practice, Materials Science and Engineering, Ohio State University, have drawn from the insights of WorldAutoSteel member companies, automotive OEMs and suppliers, and leading steel researchers and application experts. Together with their own research and field experience, the technical team have refreshed existing data and added a wealth of new information in this updated version.

The new database includes a host of new resources for automotive engineers, design and manufacturing personnel and students of automotive manufacturing, including:

- Hundreds of pages of searchable articles that include nearly 1,000 citations of original technical research papers, providing a rich library for study.
- [Search](#) tools and related posts fueled by thousands of industry-specific keywords that enable users to drill down to the information they need.
- Information on the [metallurgy](#) and mechanics of [AHSS grades](#).
- An explanation of [3rd Gen AHSS](#) and what makes these grades unique.
- A primer on [Press Hardened Steels](#), one of the most popular AHSS grades in today's automotive structures.
- Summaries of new research in resistance spot welding for joining AHSS of multiple grades and thicknesses.
- New information on [modelling resistance spot welding](#).
- An expanded [solid state welding](#) section.
- New information on RSW joining of [dissimilar steels](#) as well as [dissimilar materials](#).
- Articles written by subject-matter experts and product manufacturers.
- Integration of the popular [AHSS Insights technical blog](#).

The new online format enables consistent annual updates as new mastery of AHSS's unique microstructures is gained, new technology and grades are developed, and data is gathered. Users can subscribe at www.ahssinsights.org to receive regular updates and blogs reveal a world of experience as the database evolves.

#Ends#

Notes

- WorldAutoSteel, the automotive group of the [World Steel Association](#), is comprised of 20 major global steel producers from around the world. Our mission is to advance and communicate steel's unique ability to meet the automotive industry's needs and challenges in a sustainable and environmentally responsible way. AHSS Application Guidelines is a flagship project of WorldAutoSteel, with the goal to provide the latest information on metallurgy, forming and joining of these advanced steel, thereby supporting their application and uptake in the automotive industry. WorldAutoSteel's latest vehicle demonstration program, Steel E-Motive (www.steelemotive.world), follows a long history of steel industry demonstrations to showcase new AHSS applications for automotive structures. The UltraLight Family of Research, which began with the first industry effort of its kind in the world, the UltraLight Steel Auto Body (ULSAB), as well as the most recent program, FutureSteelVehicle, are noted for their contributions in helping automakers apply AHSS to achieve lightweighting, total life cycle emissions reduction, performance improvement and crash safety goals. Visit www.worldautosteel.org to learn more.

Contact

Kathleen Hickey, Communications,WorldAutoSteel

E: khickey@worldautosteel.org

T: +1 734 905 0062