The Auto/Steel Partnership Foundation (A/SP) is a pre-competitive research consortium of automakers, sheet steel producers and affiliate tier suppliers. For more than 35 years, A/SP members work to drive improvements from concept through realization in vehicles on the road today, as well as to support an educated workforce.

OUR MISSION

A/SP leverages the resources of automotive, steel and related organizations to enable innovations in design optimization and manufacturing technologies for achieving sustainable mobility solutions. We pass on these innovations through education for the industry and community, supporting the realization of technology and sustainability benefits through a skilled workforce.

STRATEGY: How we achieve our mission

A/SP focuses on pre-competitive technical development of sustainable lightweight steel technologies and applications, that include:

- Aligning manufacturing enabling technologies with steel development;
- Utilizing existing and emerging steel grades through vehicle mass reduction projects to support the need for lightweighting, product performance and other metrics;
- Leveraging existing manufacturing infrastructure technology as practicable, while developing stretch technologies as needed;
- Working collaboratively within the research community (universities, national laboratories, etc.) to effectively leverage technical resources and education; Working with academia, companies, and communities to support workforce training/ education; and,
- Maintaining an A/SP Technology Roadmap to help drive annual project plans.

MEMBERSHIP

Membership is open to:

- **Original Equipment Manufacturers (OEM).** Automotive OEMs with product engineering and manufacturing engineering responsibilities with captive/Tier 1 stamping operations in North America.
- **Steel Mills.** Steel companies which have made shipments to the North American automotive market in each of the past three years from their North American business units making, coating or continuously annealing automotive sheet steel products.
- **Affiliates (nonvoting).** Tier suppliers with product engineering, manufacturing engineering and R&D facilities in North America in support of automotive OEMs.

Ready to learn more about membership? Already a member and want to know how to get involved? Contact ASPinfo@steel.org.

A/SP MEMBERS:

gm · Gestamp · Martinrea · Nucor · POSCO · Ternium · Stellantis · Toyota

2022 ACTIVE PROJECTS

A/SP projects focus on technical solutions for Advanced High-Strength Steel use in vehicle manufacture, bridging the gap between the lab and the shop floor.

CORROSION TEAM
- C#02: Corrosion - Body
- C#03: Corrosion - Interface / Bolted Bi-Metallic Components

CONSTITUTIVE AND FRACTURE MODELING
- CFM#01: DIC Test Procedure (NIST Crada)
- CFM#02: Phase 2 Damage Accumulation Modeling
- CFM#03: Benchmarking and Material Testing
- CFM#05: Enhanced Formability Effect from Bend/Unbend

GMAW of AHSS
- G#03: 3rd Gen AHSS Steels - LME
- G#04: 3rd Gen AHSS LME Sensitivity Curve Development
- G#05: Fatigue Characterization & Modeling for Frames (I)

JOINING TEAM
- J#01: Liquid Metal Embrittlement (III)
- J#01.5: Liquid Metal Embrittlement (IV)
- J#02.3 : Industrial Welding Solutions (II)
- J#02.5 : LME Process Mapping
- J#03: Weld / HAZ FEA Modeling for Crash
- J#04: Alternative Joining Phase I
- J#04: Alternative Joining Phase II - Fatigue Testing
- J#07: Fusion Welding Process Modeling and Simulations (I)
- J#07: Fusion Welding Process Modeling and Simulations (II)
- J#08: High Thickness Ratio Welding Techniques

REPAIRABILITY TEAM
- R#05: 3rd Gen 980 (Uncoated/Coated) & PHS1800 (Coated)
- R#06: AHSS Repair Hole Size Study

STAMPING TEAM
- ST#02: Laboratory-scale hybrid bead die (II)
- ST#02: Laboratory-scale hybrid bead die (III)
- ST#03: Production-scale hybrid bead die
- ST#14: Springback Modeling
- ST#15: 3rd Gen Steel Press Tonnage Prediction (I)
- ST#15: 3rd Gen Steel Press Tonnage Prediction (II)
- ST#16: Laser Welded Blanks (I)
- ST#17:Hybrid Bead Simulation
- ST#18:Enhanced Formability Effect on UHSS
- ST#19: Laser Welded Blank Strain Evaluation (late '21)
- ST#20: 3rd Gen Springback Reduction w/ 'Double S' Profile
- ST#22: Local & Global Material Simulation

STAMPING TOOLING OPTIMIZATION
- STO#08.2: Laser Hardening (Trim Edge)
- STO#08.2: Laser Hardening (Radii)
- STO#08.3: Laser Hardening Large Die - Overlap Paths
- STO#10.2: Die Wear Test (II)
- STO#10.3: Die Wear Test (III) OEM Die Materials
- STO#12: Additive Metal Die Testing (I) LPB
- STO#12: Additive Metal Die Testing (II) DED
- STO#13: CALDIE Cast vs. CALDIE Bar Stock

STEEL TESTING AND HARMONIZATION
- STHT#05: OEM Material Testing Procedure
- STHT#06: Strain and Bake Properties Procedure(I)
- STHT#06: Strain and Bake Procedure (II) Additional Lab
- STHT#07: Hole Expansion Ratio (HER) variation reduction

TRAINING TEAM

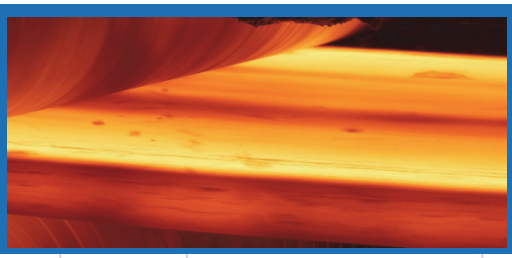
TECHNOLOGY TRANSFER

STEEL SAMPLE BANK

A/SP TRAINING OPPORTUNITIES

SUBSCRIBE

A/SP conducts private online and in-person training for our member companies, and several times a year, opens training to the industry free of charge. If you'd like us to help you train your member workforce on these important topics, contact us at ASPtraining@steel.org. If you'd like to attend the next open training, *use the QR code to subscribe to receive training date notices*.



Metallurgy

There are many grades of Advanced High-Strength Steels available to satisfy the requirements of each part of the automotive body structure. This course will take you through that evolution.

Formability

Advanced High-Strength Steels is a broad category of steels that encompasses various grades with disparate characteristics that affect forming. This course will take you through process design and process maintenance, both critical to robust operations.

Joining

Affecting the application of Advanced High-Strength Steels to part of a vehicle are considerations for Steel Chemistry, Effects of Galvanized Coating, Effects of Process Parameters, Carbon Equivalent, and Liquid Metal Embrittlement (LME). This course will discuss how to address these topics.