



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.



### With A/SP Membership you can:

- Expand your R&D Department
- Contribute project suggestions that directly relate to your business
- Work with subject-matter experts to develop real-world solutions
- Get access to world-class training for your personnel and community

A/S P Auto/Steel Partnership

## 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](mailto:ASPinfo@steel.org).**

## A/SP MEMBERS:



## ACTIVE PROJECTS

A/SP projects focus on technical solutions for steel use in vehicle manufacture, bridging the gap between the lab and the shop floor.

### CORROSION TEAM

C#02: Corrosion - Body & ZMAG Corrosion

C#03: Corrosion - Interface / Bolted Bi-Metallic Components

### CONSTITUTIVE AND FRACTURE MODELING

CFM#01: DIC Test Procedure (NIST Crada)

CFM#2.2: Damage Accumulation Modeling, Phase II

CFM#03: Benchmarks and Material Testing, Phase II

### Design Team

D#01: Giga Castings

### GMAW of AHSS

G#4: GMAB - LME Susceptibility

G#7: Investigation of RSW, GMAB, and GMAW Processes Effects on LME Mechanisms in Zinc Coated Sheet Steel

G#8: GMAW – Machine Learning

### JOINING TEAM

J#1.5: Liquid Metal Embrittlement, Phase IV

J#2.3 : Industrial Welding Solutions II

J#2.5 : LME Process Mapping

J#3.3: Spot Weld Crash Modeling

J#4.2: Alternative Joining, Phase II, Fatigue Testing

J#7.2: Fusion Welding Process Modeling and Simulations, Phase II

J#8: High Thickness Ratio Welding Techniques

WorldAutoSteel: LME Mitigation Demonstration (Partner)

### REPAIRABILITY TEAM

R#6: AHSS Zinc Removal & Hole Size Study

R#7: 3rd Gen AHSS - LME Mitigation Techniques

### STAMPING TEAM

ST#15: 3rd Gen Steel Press Tonnage Prediction, Phase II

ST#16.2: Machine Learning Model for LWB Formability (NSERC)

ST#22: Local & Global Material Card Development

ST#23: Trim Edge Quality

### STAMPING TOOLING OPTIMIZATION

STO#8.4: Laser Hardening of Cutting Die Semi-Industry Trial

STO#8.5: Laser Hardening of New Trim Steels

STO#10.4: Die Wear – Pin on Disc vs. Impact Fatigue vs. Sliding Die Wear Correlation Study

STO#12.2: Additive Metals – Direct Energy Deposition

STO#12.3 Additive Metals – Direct Energy Deposition (Trim Steel Testing – Phase II)

### STEEL TESTING AND HARMONIZATION

STHT#06: Strain and Bake Procedure, additional labs & materials

STHT#07: Hole Expansion Ratio (HER) variation reduction

STHT#08: Cut Edge Fissures

### TRAINING TEAM

TT#01: Full Joining Training Course

TT#02: MTU Capstone - Steel E-Motive Side Doors

TT#03: Formability and Metallurgy Update

### TECHNOLOGY TRANSFER

### STEEL SAMPLE BANK

## A/SP TRAINING OPPORTUNITIES

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](mailto:ASPtraining@steel.org). If you'd like to attend the next open training, [use the QR code to subscribe and 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.