

Detroit Engineered products (DEP), is an engineering services, product development, software development, consulting and talent acquisition company. Since its inception in 1998 in Troy, USA, DEP is now a global company with footprints in Europe, China, Korea, Japan, and India. DEP uses the accelerated and transformed product development process, accomplished by utilizing our proprietary platform, DEP MeshWorks, which rapidly reduces the development time of products for all segments. The MeshWorks platform delivers tool sets that accelerate virtual validation activities associated with powertrain development across all stages for both conventional and electric powertrain.

Several tools in MeshWorks have been created with deeper understanding of the needs in a powertrain engineering team. Tools like rib addition, feature removal, model checker, fuse welding, wall thickness reduction options, design space building tools and other model assembly tools have accelerated the way engineers perform model changes for what if studies and optimization.

DEP's IC sensor (In-Cylinder) offers comprehensive portfolio of combustion analysis to the engine design and testing teams in terms of real-time gathered data and make decisions considering emissions, combustion, timing, pressure pattern and performance parameters. This is applicable for single and multiple fuel engines.

The DEP TRIO of IC Sensor, MeshWorks tools and proven technological processes like MDO can significantly add value to Powertrain Engineering.



## ELECTRICAL ARCHITECTURE CAPABILITIES



## Power & Signal Distribution System (PSDS)

Wires transmit power and signal to electronics control units, actuators and other onboard electronics. In hybrid and electric vehicles, cables transmit high-voltage power from the battery to the electric propulsion motor.

3D optimized vehicle harness routing:

- Power distribution
- Grounding distribution
- Harness weight reduction to improve fuel efficiency
- Electrical/Mechanical Protection

## Power electronics & HV systems Modeling & Simulation

Power electronics is the application of solid-state electronics for the control and conversion of electric power.

Solid State electronics devices

- AC/DC power conversion
- Noise reduction

## EMI/EMC Testing & Analysis

Model simulation Testing:

- Immunity
- Emission

## Global Battery Safety

All the batteries are electrochemical device optimized to store and release energy according to the application demand.

- Regulator and testing requirements.
- Modeling & Simulation.



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