

Deformation Resistance Welding

Fresh Ideas Growing

Driving Tomorrow's Technology
Driving Tomorrow's Technology

What is DRW?

Delphi Technologies, Inc. is pleased to present Deformation Resistance Welding (DRW), a revolutionary new metal-joining technology that delivers reliable, repeatable welds at significantly lower cost than conventional welding solutions.

Originally applied within Delphi Corporation to replace automotive brazed joints, DRW's potential applications as welding solutions are numerous. Delphi Technologies has targeted the automotive and non-automotive industries as ideal launch points for this state of the art new technology.

Parties interested in licensing or receiving additional data on DRW technology should contact:

Jayson Pankin 248-813-8068



Welding challenges

Current welding technologies are burdened by significant business and engineering challenges, including:

- High capital cost of equipment
- Labor intensive
- Heat-affected zones
- Limited automation
- Inconsistent quality
- Thin wall application

DRW:

Addressing the challenges

Deformation Resistance Welding technology addresses these challenges, while drastically reducing welding, manufacturing, and maintenance costs.

Several Fortune 500 companies have expressed interest in DRW. Technology validation initiatives are being conducted with leading license candidates, under the oversight of Delphi Technologies, Inc.

The DRW Technology Value Proposition

For manufacturers...

- Lower materials and capital cost
- Cuts welding cycle time by up to 79%
- Localized heat application
- Solid-state weld flexibility
- Geometry-independent
- Automation-friendly
- Can join dissimilar materials & shapes

For customers...

- Eliminates weld leakage
- DRW weld stronger than parent metal
- Eliminates tube thinning and porosity
- Extends products service life
- No filler material required
- ASME cold case submitted for approval

DELPHI

Deformation Resistance Welding

Technology Commercialization

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Delphi Technologies, Inc. (DTI) is a wholly-owned subsidiary of Delphi Corporation. Our mission is to create, manage, protect, and leverage Delphi's intellectual property. Delphi is a world leader in the supply of mobile electronics, automotive components, integrated systems and modules.

- #56 on the Fortune 500 list
- Spun off from General Motors in 1999
- 2004 sales of \$28.1 Billion
- Headquartered in Troy, Michigan
- 191,000 employees in 42 countries

Technology validation

DRW technology development launched in July 2001 and is scheduled for multiple production deployments in 2005. DRW has passed all initial leak, functionality, and strength testing for a wide variety of applications.

Delphi studies have identified broad application potential for DRW, including exhaust systems, tubular spaceframes, fluid-based mechanical systems, and load-bearing structural applications. The technology is protected by multiple patents and pending patent applications filed with the USPTO.

Licensing opportunities

Parties interested in learning more about DRW should contact Jayson Pankin at the number below to arrange for a technology demonstration.

Contact

For more information on this exciting technology, or to learn about licensing opportunities, please contact:

Jayson Pankin

Delphi Technologies, Inc.

248-813-8068

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