A Division of Griffiths Corporation

A Griffiths Company

ISO 9001:2000
Registered with

SGS Société Générale de Surveillance

10240 Industrial Drive
Charlotte, NC 28134-6517
Phone (704) 554 – 5657
Fax (704) 554 - 1866

“ Dedicated to the future with innovative ideas for an innovative world ”

Welding and Assembly

SHORT RUN STAMPINGS
FMS LASER SYSTEMS
LONG RUN STAMPINGS
ROBOTIC WELDING
MECHANICAL ASSEMBLIES
AMADA VIPROS 357 TURRET

Visit our Website at www.dtek-net.com

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WELDING AND ASSEMBLY AT DTEK

At DTEK Corporation, approximately 40% of the parts we ship go through our Welding Department. These parts range from simple brackets with threaded nuts attached to large commercial mower decks and other assemblies, some in excess of 100 pounds. Many of these assemblies are then plated or painted, and become both structural and cosmetic in their applications.

DTEK Corporation employs a variety of welding capabilities to meet the needs of our customers. These capabilities include:

- **MIG (Metal/Inert Gas) Welding**
- **TIG (Tungsten/Inert Gas) Welding**
- **Resistance Spot Welding**
- **Resistance Projection Welding**
- **Robotic Welding**

This brochure goes through the different processes available at DTEK, with information on each process and product examples.

Feel free to contact us for your welding and assembly needs.

PMA PRECISION METALFORMING ASSOCIATION

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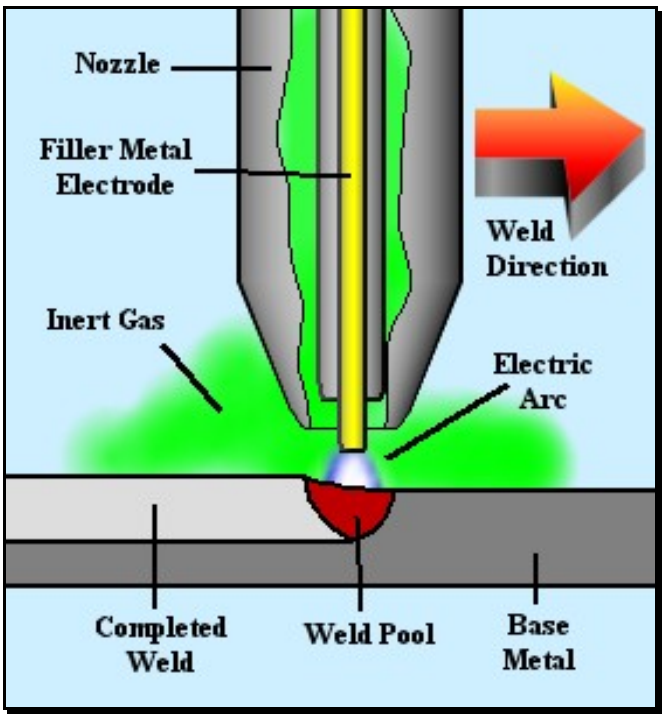
MIG (Metal/Inert Gas) Welding

MIG welding (or Gas Metal Arc Welding/GMAW) uses a metal electrode that is melted into the weld joint as filler. The weld zone is protected from oxidation by a shield of (usually) inert gas.



This highly versatile welding method can be used for many different types of metals and is well suited for long welds and thick sections. It also has the ability to be run from any position and requires little post-weld cleanup.

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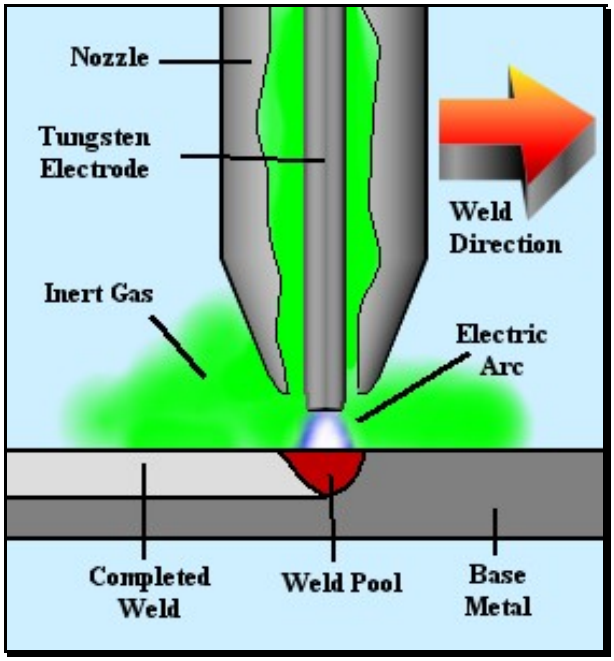
TIG (Tungsten/Inert Gas) Welding



More properly known as GTAW (Gas Tungsten Arc Welding), TIG welding uses a tungsten electrode that is not melted into the weld. It can be used with or without a filler metal added during the process. If a filler metal is not used, the molten base metal provides all of the weld material.

TIG welding results in very clean, high quality welds with little distortion, but is slower and less suited for thick sections than MIG welding.

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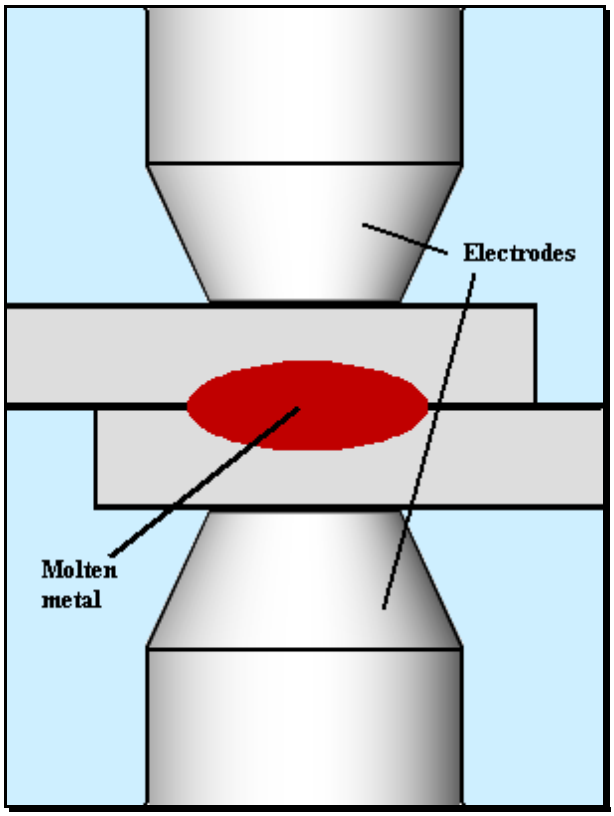
Spot Welding

Resistance Spot Welding is a welding process used to join overlapping metal surfaces. Electrodes are placed on the surfaces to be joined, and the parts are pressed together. A large current is then passed through the work piece, melting a small bead of metal between the two surfaces. This bead then resolidifies to join the parts.



Spot Welding, like all resistance welding processes, is fast, economical, and suitable for high-volume production.

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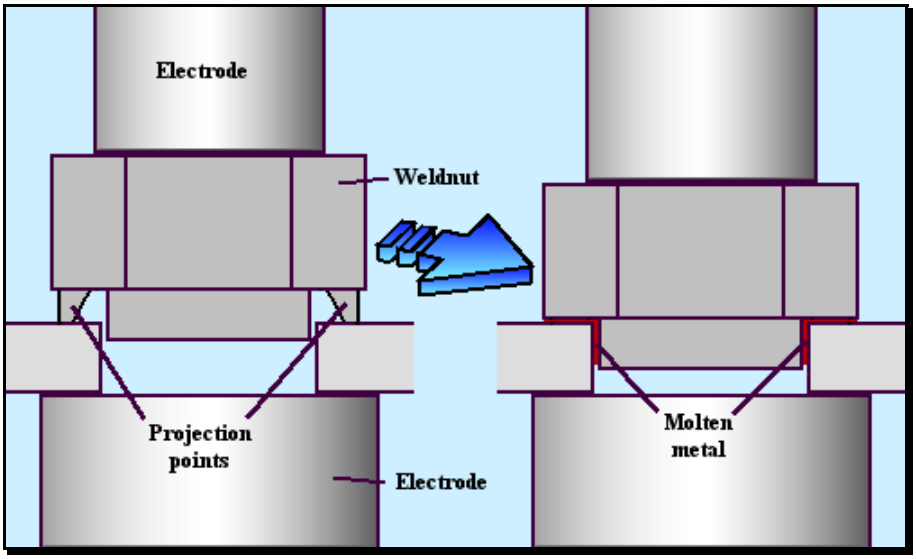
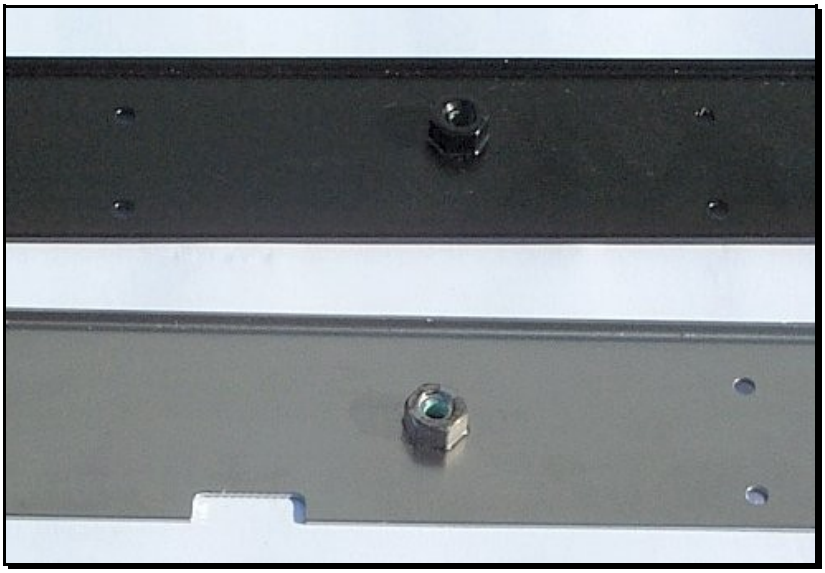
Projection Welding



Projection Welding: Projection welding is very similar to spot welding, but the contact between the parts to be joined is made by small projections formed in the parts themselves. Current flows through these contact points, melting them and joining the parts with the resulting molten metal.

Projection welding is used at DTEK primarily to weld threaded nuts to our assemblies. Special weld nuts, pre-machined with projection points, are used in this process.



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Robotic Welding

Welding, in general, is a process that lends itself well to automation for suitable part geometries. Robotic welding is fast, repeatable, and best suited to long-run production.

Our robotic welders weld many of the largest assemblies DTEK produces.