



## The Evolution of TIG

**TIP TiG provides the lowest possible weld heat input and the benefits are many:**

- Welds with the smallest HAZ
- Always superior weld properties
- Less concern for weld cracks
- Welds with the lowest oxidation and distortion.

**TIP TiG agitated weld pool benefits:**

- Reduces the concerns with sluggish alloys improving weld fusion and providing welds with the lowest possible internal weld defects.

**The TIP TiG welder has greater control of the weld wire and process:**

- The weld wire is always in the arc sweet spot
- The consistent fed TIP TiG wire reduces TIG arc start stops and provides a weld uniformity not attained by any manual TIG welder
- Weld control - the TIP TiG welder can use one or two hands on the torch
- The TIP TiG welder does not need a foot control.

**TIP TiG is located at: The Philly Navy Yard.  
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# TIP TIG is the logical evolution of TIG into the semi-automated and automated TIG process.



**TIP TIG DESCRIPTION:** The TIP TIG power source provides the hot wire current. The unique TIP TIG wire feeder and water cooled TIG torch feeds the hot wire into the TIG arc. The TIP TIG weld arc is provided by a regular TIG power source.



**TIP TIG IS A MECHANICAL SOLUTION TO TIG WELD ISSUES:** In contrast to regular TIG or Hot Wire TIG, the TIP TIG wire entering the TIG weld pool is mechanically superimposed with an action from the patented wire feed motion that creates a vibration on the weld wire.

The TIP TIG wire is constantly directed to the center of the fluid weld pool, and the wire vibration agitates the weld driving the most fluid part of the weld outwards towards the cooler weld periphery. The TIP TIG mechanical weld action dramatically changes the weld surface tension and dynamics and reduces the sensitivity to the weld receiving the weld wire.



**TIP TIG WELD QUALITY BENEFITS:** In contrast to the manual pulsed MIG, regular TIG or the automated Hot and Cold wire TIG processes, irrespective of the alloys welded, the patent pending TIP TIG process has the potential to consistently provide superior quality welds with improvements in mechanical and corrosion properties.



**TIP TIG WELD COST BENEFITS:** A great weld cost benefit to all weld shops that use TIG for high quality welds is the TIP TIG process will typically deliver manual and automated TIG welds with a 100 to 400% increase in weld deposition rates.

**Controlled TIG wire feed rates and unique TIG weld agitation creates a domino affect:** The increase in the TIP TIG weld fluid area reduces the weld sensitivity to both manual and automated weld wire delivery. The higher than normal TIP TIG wire feed rates enables higher TIG weld current. The higher weld current combined with the TIP TIG Hot Wire current and agitated, slower solidifying weld provides numerous weld benefits never before attained.



## TIP TIG PROCESS BENEFITS

- TIP TIG is the only manual process that has the potential to consistently produce zero weld defects on any application and any alloy.
- Manual TIP TIG is typically 100 – 200% faster than TIG for all position pipe fill passes and 200 – 400% faster for none pipe applications.
- The regular Hot Wire TIG process is not suited for manual welding, in contrast the TIP TIG process delivers the ultimate in both manual / automated weld quality. TIP TIG also reduces the sensitivity of the automated Hot Wire process to low to medium current weld wire delivery.
- TIP TIG, one single optimum weld process for any metal, any weld, and any weld position. TIP TIG will require only 2 or 3 simple common weld settings for all global weld applications.
- On many stainless open root tank and vessel welds, with TIP TIG, no back gouging, no grinding and often no high volume purge gas is required.
- In contrast to all weld processes, TIP TIG will produce the least weld fumes and fume removal equipment on most stainless and alloy applications will not be required.

**To find up to date information, news and to register for the next FREE TIP TIG workshop please visit [www.tiptigusa.com](http://www.tiptigusa.com)**