

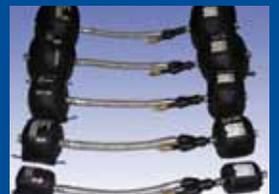


SPECIALTY WELDING PRODUCTS



COB
INDUSTRIES, INC.

ARGWELD®
TECHWELD™





THE ARGWELD® PURGE BLADDER SYSTEM IS BASED ON A SIMPLE IDEA. IT COMPRISES TWO PROTECTED BLADDERS CONNECTED BY A SPINAL TUBE. THE TUBE CARRIES THE GAS TO INFLATE THE BLADDERS AND RELEASE VALVE TO PURGE THE SPACE BETWEEN THEM.

ARGWELD® PURGE BLADDER SYSTEMS

Argweld® Inflatable Purge Bladders are the most effective systems available for pipe purging. The system is pulled into position and inert gas is used to inflate the bladders (dams) which provide a 100% airtight seal on either side of the weld joint, after which the pressure in the system opens the purge valve and the gas purges the space between the bladders ensuring a clean, even penetration bead. Once the weld is completed, the gas is turned off and the bladders are deflated so the system can be pulled through the pipe to the next weld. These systems are specifically designed to be easily pulled into position through long sections of pipe and around elbows without the risk of getting jammed or stuck in the pipe.

This uniquely designed system has become an industry standard worldwide for applications involving stainless steel, chrome or other types of pipe that require an oxygen-free weld. The Argweld® systems are used extensively at LNG sites, refineries, power plants, food processing, pharmaceutical and fabrication facilities.

FEATURES

Compared to other methods of gas purging for pipe welding the Argweld® Purge Bladder systems have a number of distinct advantages that lead to consistently clean welds and significant savings.

- **Reliable.** A good purge can be achieved and maintained every time without the fear of the dams becoming dislodged or compromised during the weld process.
- **Faster.** These systems are the fastest method of pipe purging by far with no time wasted building, taping or gluing dams in place, and no time wasted purging long sections of pipe. Due to their superior design, the purge time required is up to 8 times faster than foam, paper or other conventional purging methods. For example, an 8" pipe can be purged to less than 1% O₂ in less than 60 seconds and a 12" pipe in about 90 seconds.
- **Use less inert gas.** Argweld® purge systems also offer huge savings from reduced gas consumption for weld purging. They typically use less than 1/3 of the amount of gas required with other types of purge dams.
- **Easy to use.** Argweld® purge bladders greatly simplify the process of inert gas purging. With minimal training bright shiny welds that pass inspection can be achieved in no time.

As a result of the reduced waiting time, faster purge times and reduced gas consumption Argweld® purge systems pay for themselves in just a few welds. Don't put your weld at risk with "make-do" devices that can tear or become dislodged and end up costing time and money.

USE THE RIGHT TOOL FOR THE JOB!



A STAINLESS REPUTATION

ARGWELD® STANDARD TANDEM PURGE BLADDERS

These are the original Tandem Inflatable Purge Bladders that have been an industry favorite for years. These economic, efficient systems offer quick and effective pipe purging for consistent, high-quality welds. Available in sizes for 2" through 7" pipe.



ARGWELD® STANDARD TANDEM PURGE BLADDERS

ARGWELD® MULTI-PORT PURGE BLADDERS

The latest version of the Argweld® Tandem Purge Bladders now offers multiple inlet / exhaust ports for faster, more effective weld purging. The user is able to increase the gas flow without fear of over-pressurizing the weld by utilizing additional inlets / exhausts while maintaining an airtight seal on the pipe ID.



ARGWELD® MULTI-PORT PURGE BLADDERS

The multiple exhaust ports can also be utilized to accommodate a pressure gauge to monitor gas pressure for orbital welding applications. This is an important new feature added to the already popular Argweld® Tandem Purge Bladders. Available in sizes for 2" through 7" pipe.

ARGWELD® QUICK-PURGE™ SYSTEMS

The Quick-Purge™ systems are specifically designed for larger diameter pipe. They offer a primary gas intake and an auxiliary line which gives the welder the ability to pump as much or as little gas into the purge area as needed for a fast purge with the appropriate amount of pressure. This is particularly important when welding larger bore pipe. The tandem inflatable bladders are connected by a sleeve instead of a spinal hose which serves **2 critical purposes:**

1. The sleeve contains flexible supports that maintain the shape of the larger bladders even when deflated so that when they are pulled into position and the gas is turned on, they automatically seat themselves properly in the pipe and provide a 100% airtight seal on either side of the weld every time. The support of the sleeve prevents the bladders from folding over or getting jammed up while providing enough flexibility to allow the system to be pulled through long sections of pipe and around elbows with ease.



ARGWELD® QUICK-PURGE™ SYSTEMS

Quick-Purge™ continued

2. The sleeve design also further reduces the amount of air volume that needs to be purged, which dramatically speeds up the process. Not only do the inflatable dams isolate the section of pipe around the weld joint for purging, the sleeve eliminates the majority of volume between the dams, making this the fastest purge system available. In side-by-side comparison studies Quick-Purge™ systems have proven to be up to 8 times faster than foam, paper or other conventional pipe purging methods.

These systems are rugged and durable, designed to be used over and over to produce hundreds of clean, high-quality welds. The sleeve and inner portions of the bladders are all made from heat-resistant silicone material to withstand the high temperatures encountered in the welding process. Available for sizes 8" and up.

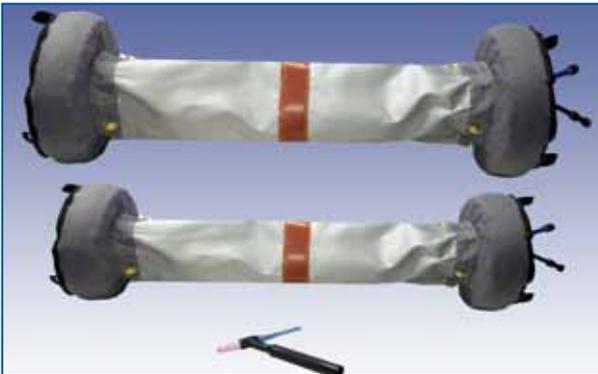
ARGWELD® HEAT-RESISTANT QUICK-PURGE™ SYSTEMS

These are based on the Quick-Purge™ design, modified with longer sleeves and completely encased in heat-resistant materials to handle the higher temperatures encountered with pre-heat welding processes on chrome and other exotic pipe materials.

ARGWELD® PIPE PURGING / TEST PLUGS

Argweld® Pipe Purging Plugs are used on smaller diameter (1/2" – 6") pipes, tubing, fittings, and in applications where purge bladders or purge film can not be utilized.

These plugs are great for sealing outlets when purging, pressure testing pipe joints, or for FME purposes (keeping contaminants out of pipe). They are made from high quality nylon and won't rust or corrode, are virtually shatter-proof and resist many chemicals. The popular Purge Plug Kit offers multiples of each size from 1/2" – 4" in a custom foam-lined carrying case. These plugs are also offered up to 36" in Aluminum.



ARGWELD® HEAT-RESISTANT QUICK-PURGE™ SYSTEMS



ARGWELD® PIPE PURGING PLUGS ARE USED ON SMALLER DIAMETER (1/2" TO 6") AND SHORTER LENGTH TUBE OR PIPE APPLICATIONS. GREAT FOR SEALING OUTLETS WHEN PURGING VESSELS, AS LOW PRESSURE TEST PLUGS FOR PIPE JOINTS, OR TO STOP CONTAMINANTS FROM ENTERING TUBING. MADE FROM HIGH QUALITY NYLON, THESE PLUGS WON'T RUST OR CORRODE, ARE VIRTUALLY SHATTER PROOF, AND RESIST MANY CHEMICALS.



A STAINLESS REPUTATION

FEATURES:

- Made from high quality nylon with natural rubber seals (replacement seals available in Nitrile, Viton and Silicone)
- Available with Solid Stems or Vented Stems
- Shatter-proof
- Will not rust or corrode
- Easily cleaned
- Friction-reducing acetyl copolymer thrust washer inserted between the top plate and wing nut provides easy expansion
- Threaded stems are standard BSP sizes (adapts to NPT)
- Nozzles to accept 3/8" gas hose



1/2" TO 4" PURGE PLUG KIT

ARGWELD® PURGE MONITORS

ARGWELD® MK V PURGE MONITOR

The Argweld® MK V Purge Monitor has become the best selling purge monitor in the industry. It is small, portable, easy to use and reliable. It will monitor O2 levels down to 0.01% (100 PPM) with a high degree of accuracy and comes complete with a stainless steel probe, 6 ft rubber tubing, aspirator bulb and carrying strap in a custom foam-lined case.

It can be used in a continuous monitoring mode by connecting the tubing to an exhaust port of a purging device or enclosure and allowing the gas to flow freely over the sensor, or it can be used in a sampling mode by inserting the stainless steel probe into the area being purged or to an exhaust and using the aspirator bulb to initiate the flow across the sensor. The LCD scale displays the oxygen level in figures that can easily be read from a distance of several feet.

The Argweld® MK V is specifically designed and built for welding applications to give accurate readings at the low O2 levels required for weld purging. Don't risk your welds with O2 sensors and monitors designed for confined space or medical applications that are inaccurate at lower O2 levels.



ARGWELD® PURGE MONITORS DETECT THE LEVELS OF OXYGEN IN PURGING GAS TO INDICATE WHEN IT IS AT A SAFE LEVEL TO WELD.



THE ARGWELD® TITANIUM PURGE MONITOR HAS BEEN SPECIFICALLY DESIGNED FOR INDICATING OXYGEN LEVELS IN ARGON GAS FOR WELD PURGING.

ARGWELD® TITANIUM WELD (Parts Per Million) MONITOR

The PPM Monitor is specifically designed for oxygen monitoring during the welding of titanium and ultra-pure stainless steel applications to prevent discoloring or adverse effects on the weld caused by oxygen.

This unit will accurately read down to 10 parts per million (or 0.001%) on a digital display and offers an audible alarm to alert the user if the oxygen content has risen above desired levels. It also incorporates a low maintenance sensor with a life expectancy of up to five years.

An optional software package is available to interface with a computer to store and print results and graphs for quality control purposes.



ARGWELD® CRITICAL WELD PURGE MONITOR

The Critical Weld Purge Monitor is the latest in the line of Argweld® Purge Monitors. This unit is similar to the Titanium Weld (PPM) Monitor with a few extra features. It has an audible alarm if the O₂ level rises above a preset limit and a signal can be used to terminate the welding operation should this level be exceeded. A unique new low-maintenance sensor is used which has an indicated five year life expectancy.

An optional software package is available to allow a computer to be used to store and print results for quality control purposes.

One of the added key features is an automatic pump for extracting a continuous gas sample where it is not possible to deliver a constant flow over the sensor.

The ARGWELD® Critical Weld Purge Monitor can be used and interfaced with all manual and automatic welding techniques, but will be much appreciated by those requiring sensitive monitoring of low oxygen levels when joining the more reactive materials such as titanium alloys and duplex steels.



A STAINLESS REPUTATION



ARGWELD® FLEXIBLE WELDING ENCLOSURES

Argweld® Flexible Welding Enclosures are used when space is a concern or a rigid enclosure is not economically viable. Typically used for multiple weld jobs on a single piece of metal within a completely purged environment. They are available in a wide variety of sizes out of stock and can be made to custom specifications. In addition to the standard models, special enclosures can be designed and manufactured to suit most applications.

Typical applications include the occasional and production welding of titanium and nickel alloy components for the aerospace, medical and racing industries and for the welding of stainless steel components to eliminate the expensive cleaning of discoloration.

Argweld® Flexible Welding Enclosures are made with the finest quality materials possible, using material formed from multiple layers of UV-resistant clear PVC which typically last several times longer than similar looking units on the market. They are designed to offer the welder the most unobstructed visibility possible, without seams and hardware that can block the welder's view. Argweld® Enclosures also come with a standard exhaust port at the top of the unit which allows for easy interface with a Purge Monitor.



STANDARD ENCLOSURES (INCHES)

DIAMETER:	36"	48"	60"	72"
SIDE HEIGHT:	17 3/4"	21 1/2"	21 1/2"	21 1/2"
OVERALL HEIGHT:	21 1/2"	31 1/2"	31 1/2"	31 1/2"
TOP PANEL:	7 3/4"	17 3/4"	17 3/4"	17 3/4"



EXTENDING THE RANGE OF ARGWELD® PURGING PRODUCTS AND PROVIDING AN ECONOMICAL NON METALLIC WELD BACKING SYSTEM FOR THE BACKING OF WELDS, WHERE PURGING IS REQUIRED BUT NOT EASILY ACHIEVED.

ARGWELD® BACKING TAPE

Typically for the welding of thin wall stainless steel sheet and vessels from one side only, the Backing Tape can be attached to the backside of the weld to support the weld pool, keep the argon from the torch surrounding the weld pool, and eliminate the need to back-purge while giving a consistent high quality under bead profile.

Backing Tape offers tremendous savings of purge gas and waiting time particularly when welding large vessels.

The heat resistant adhesive aluminum backing foil is 3" wide with a 1" woven glass fiber cloth strip in the middle. There are now many grades of Backing Tape that will support single pass TIG welding at weld currents up to 240 AMPS, without change to the chemistry or metallurgy of the weld.



THE USE OF WATER SOLUBLE FILM FOR MANUFACTURE OF PURGING DAMS IS WELL PROVEN AND THE ARGWELD® FILM GIVES SUPERIOR RESULTS OVER ALL OTHER WATER SOLUBLE PRODUCTS.

ARGWELD® WATER SOLUBLE PURGE FILM

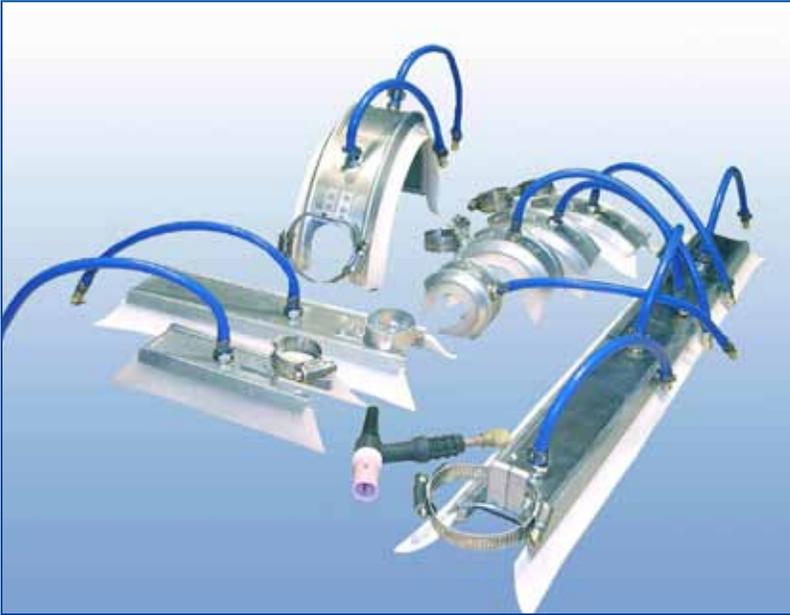
Argweld® Water Soluble Purge Dam Film can be used for stainless, duplex and chrome-moly steels as well as titanium.

The Argweld® purge material makes dams which produce an impenetrable purge barrier but which can easily be washed away when hydrostatically testing the pipe or just by normal wash out.

It dissolves away completely without leaving any fibers to clog up filters or other sensitive parts in a system and it can resist pressure in all directions so that it can maintain a good gas barrier throughout the purging process.

Trace element certification can be provided to show that Argweld® film does not contain any harmful elements and that the quantity of halides is well below the permissible levels.

The film and adhesive are completely biodegradable and all packaging materials are recyclable.



ARGWELD® TITANIUM TRAILING SHIELDS GIVE SECONDARY SHIELDING GAS COVERAGE WHICH PREVENTS THE MATERIAL FROM OXIDIZING FOLLOWING WELDING ON PIPE AND SHEET.

ARGWELD® TRAILING SHIELDS

The Argweld® leading and trailing shields are designed for high quality gas coverage of titanium while welding. They can be supplied to fit any make of TIG or plasma welding torch for manual and automatic welding on pipes, vessels or flat plate. By using an Argweld® trailing shield, titanium welds will be left bright and shiny and eliminate discoloration.

Argweld® purge shields will reduce gas consumption, save re-work and eliminate wasted materials cost due to oxidation. Argweld® purging shields can also be used for welding stainless steel, duplexes as well as titanium and any other weldable metal where discoloration or oxidation need to be eliminated.

The shields are manufactured to weld flat plate or any diameter tube, pipe or vessel. They are manufactured with variable radii to suit each diameter, contoured for either outside or inside welding.



THE TEG-III IS A HIGH PERFORMANCE TOOL THAT IS AN ESSENTIAL FOR EVERY WELDING SHOP WHERE TIG OR PLASMA PROCESSES ARE USED.

TECHWELD™ TEG III GRINDER & TEG III GRINDER EXT

TIG welding requires tungsten electrodes with perfectly ground and polished tips. Huntingdon Fusion Techniques' TEG-3 provides these, time-after-time, to exactly the same size and shape at low cost.

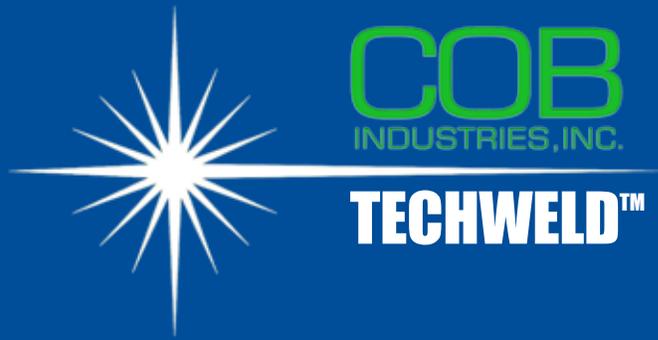
The diamond wheel grinds the tungstens longitudinally. This prevents arc flicker or wander caused by circumferential lines or ridges found on electrodes which have been ground incorrectly.

With tungsten electrodes ground and polished, mechanized welding can produce identical, repeatable results every time. With manual welding the shape of the tungsten is just as important. With a correctly-shaped tip, the arc can be precisely positioned with none of the preferential arcing experienced when using poorly shaped manually ground tips.

The TEG-3 is a high performance tool that is an essential for every welding workshop where the TIG process is used, and it comes with the most powerful motor of its kind with a lifetime warranty.

COB Industries now offers a new vacuum dust extraction unit for the TEG-3. No airlines or extra power sources are needed as the unit relies on vacuum suction that is powered from a single power source, provided by either a 110v or 220v motor that also turns the grinding wheel. Hazardous dust is easily collected and can be disposed of safely.

The unit uses a self contained 5-7 micron filter that can be easily maintained and changed by the owner/user at the end of its shelf life, roughly 150hrs. The vacuum unit is expected to remove 100% of the dust exhausted from the grinding wheel area. Because the new version does not have an external airline fitted it becomes more maneuverable around the shop or jobsite. All existing TEG-3 Tungsten Grinders with the old extraction accessory unit can be retrofitted with this new vacuum system.



A STAINLESS REPUTATION

TECHWELD™ MULTI-STRIKE™ ELECTRODES

COB and Huntington Fusion Techniques Limited is proud to introduce a new TIG welding electrode material.

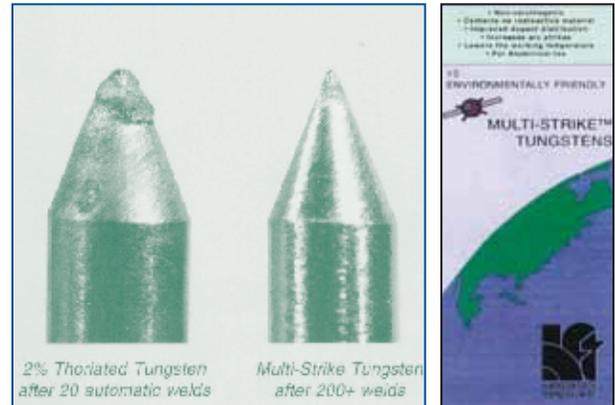
A tungsten electrode has been developed with a collection of non-thoriated, non-radioactive, noncarcinogenic dopants to make it weld at high, low and medium current ranges on both DC TIG (GTAW) welding of Steels and alloys as well as AC TIG (GTAW) welding of Aluminum and its alloys.

The mix of Dopants:

- greatly enhances electrode life
- multiplies the number of strikes per tungsten
- does not contain any radioactive material.

MULTI-STRIKE™ TUNGSTENS for improved TIG Welding:

- Increase the number of arc strikes before resharpening is necessary.
- Contains no radioactive material.
- Lowers the working temperature giving cooler welds.
- Special packaging gives guarantee of quality and tractability.
- Eliminates carcinogenic thoria.



TECHWELD™ MULTI-STRIKE™ TUNGSTEN ELECTRODES ARE THE WORLDS LEADING NON-THORIATED TUNGSTEN ELECTRODE. THEY CAN GIVE TEN TIMES THE LIFE OF STANDARD TUNGSTENS, CAN BE USED FOR ALL APPLICATIONS INCLUDING ALUMINUM AND STEEL AND ARE FULLY BATCH TRACEABLE.



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