



CHECKING YOUR TIG GAS SUPPLY BEFORE TESTING

Welder Qualification Tests – TIG

At this time of year welders all over the country will be going along to test centres to complete weld tests in readiness for deployments at various nuclear, oil and gas and energy plant turnarounds and outages.

One of the big issues with failure of TIG test pieces is the presence of porosity. The welds often appear neat and tidy so the ability of the welder is not always the root cause of the defect.

With welders arriving to test, often using machines they are not used to and using equipment that has been heavily used by others the root cause of these defects is often the failure of the welder to correctly check the operating condition of the equipment.

Below are a few ideas for checking your TIG welding equipment prior to commencement of welding.

1. Leak test your gas system whilst it is under pressure. Check all of the joints along the system including:

- a. Bottle to regulator
- b. Regulator to flow meter
- c. Flow meter to hose
- d. Hose to machine
- e. Machine to TIG torch

2. At the TIG torch check the following:

- a. That the rubber seal ring is present and in a good condition on the back cap
- b. That the white heat shield seal is in place behind the ceramic shroud
- c. That the flexible neck has not broken

3. Although you have set the gas flow at the regulator, check the 'at torch gas flow' to ensure it is correct for the size of shroud you are using.



sif tips



Technical advice in the original SifTips style was started in 1932. 'Sifbronzing' is an almost universally recognised way of describing the low temperature bronze welding of sheet steel, cast iron and other metals. This explains why Sifbronze, the company which first developed and promoted the technique, is generally considered to be a supplier of high quality welding rods, wires, fluxes and equipment.

'Will the Welder' was a SifTips magazine that was produced in the early 1930s. The aim was to provide users with ideas and tips on how to get the most out of their welding equipment.

In 2007, Weldability Sif acquired Sifbronze, the welding consumables division of the Suffolk Iron Foundry, known internationally as Sif. Sif is renowned for its UK manufacturing heritage as well as its complete range of quality welding consumables for MIG/GMAW, TIG/GTAW, Arc/SMAW, Oxy/Fuel Welding and Brazing which have been used globally for almost a century.

4. If you have access to a gas lens and cup, change the standard torch body and shroud, this will give you a bigger area of gas coverage and a smoother gas flow over the weld.

5. Ensure your test piece is thoroughly cleaned, if welding pipe make sure this is done inside and out, at least 50mm both sides from the root face. Checking the integrity of your gas system and your TIG welding equipment may take 10 minutes, but the cost of failure may mean a lost opportunity.

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