

Gas Flux Process 'Complimenting the Traditional methods'



Technical advice in the original SifTips style which started in 1932

As technology moves on, the 'traditional' methods of joining metals by gas welding or brazing are gradually being converted to the TIG or MIG processes. However, there is still a place for 'traditional' processes for either production of parts designed for brazing or for repair and maintenance work, which is dependent on welder skill and technique.

Applications

Immediate thoughts turn to tubular applications, where a smooth fillet joint is required, which is then possibly painted or plated to look attractive. Such items might be bicycles, wheelchairs, hospital furniture, go-karts, automotive assemblies. The list could go on and on.

These are all predominantly produced from steel, but GasFluxers are also used on copper and brass components to aid the brazing process and reduce subsequent cleaning operations. Many assemblies are suitable for automatic brazing and the GasFlux system is an ideal method for delivering flux to the joint area.

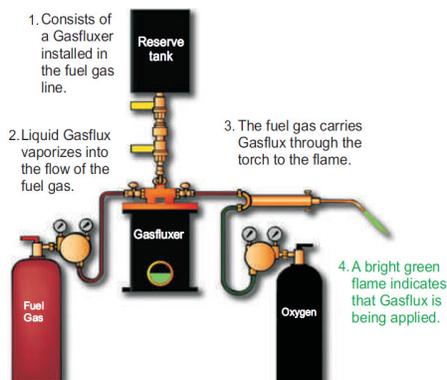
For steel applications, the ideal rods to use are Sifbronze No 1 (EN 1044 CU 302) and also our Special bronze 'Sifbronze No 101', which is ideal for production work with the GasFlux process. For work on copper and brass, filler rods such as Sifcupron No 17 (EN 1044 CP201) and No 17-2Ag (EN 1044 CP105) and a range of silver solders would be considered.

The Process

The 'GasFlux' process is a very attractive alternative to using powder flux or flux coated rods. It literally puts flux into the fuel gas and it is delivered to wherever the flame is directed, resulting in superior fluxing and wetting action, which encourages the brazing alloy to flow evenly and follow the flame smoothly giving optimum strength and outstanding appearance.

As shown in the diagram, a GasFluxer unit is installed in the fuel gas line (usually acetylene). The Reserve Tank is detachable, so that it can be removed from the welding area and any possible source of ignition, when it is topped up with GasFlux Liquid, which is flammable; an important health and safety point.

The Gasfluxer unit can control the gas flow rate and also the amount of liquid flux being collected, thereby ensuring that just the right amount of flux is delivered to the joint, ensuring a sound braze with a minimum of flux residue removal work. The flame with Gasflux burns with a green hue and ideally blue goggle lenses should be used to clearly view the joint area during the brazing process.



Sifbronzing is an almost universally recognised way of describing the low temperature bronze welding of sheet steel, cast iron and other metals. The reason behind this fact summarises why Sifbronze, the company which first developed and promoted the technique, is generally considered to be a supplier of top-quality welding rods, wires, fluxes and equipment.

'Will The Welder' was a Siftips magazine that was produced in the early 1930's. The aim was to provide users with ideas and tips as to 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 manufacturing heritage and for 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.



Benefits

The GasFlux process improves brazing quality and reduces costs by:

- Optimum joint strength
- Reduced filler rod consumption
- Minimising post joint cleaning operations
- Quicker brazing times.

The flux is only delivered where the flame is directed. With a complicated design where the flame cannot access a blind side or where deep penetration is required, it maybe necessary to mix a powder flux to paste and add to the 'blind' areas prior or during assembly.

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