

sif tips



Sifbronze was established in 1925 and is one of the last companies who continue to manufacture welding consumables here in the UK.

In February 2008 they became a wholly owned company within the WWS Group and now feature as part of the combined WELDABILITY SIF product range.

The company has kindly offered to provide a series of technical advice documents for the welding sales engineer and AWD members, following the traditional SIFTIPS format which was originally started in 1932.

Gasflux Process

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

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.

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.

BENEFITS

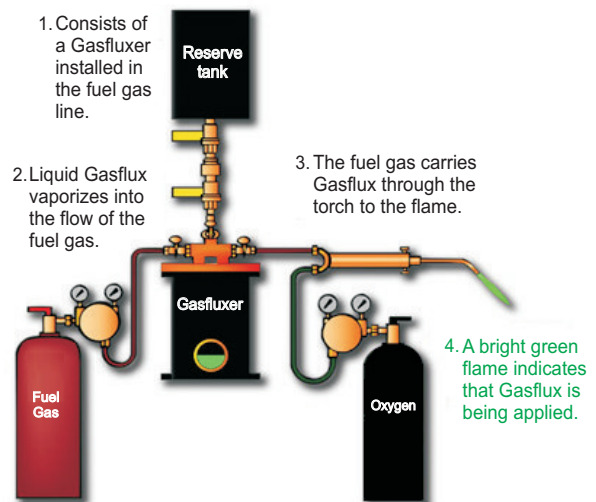
The GasFlux process improves brazing quality and reduces costs by:

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

GENERAL

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 may be necessary to mix a powder flux to paste and add to the 'blind' areas prior or during assembly.

For more information, visit: www.gasfluxusa.com



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