Sifbronzing ‘A Guide To The Technique’

Technical advice in the original SifTips style which 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.

The Sifbronze Technique

For successful ‘sifbronzing’ or ‘bronze welding’, parts must be thoroughly cleaned and degreased and to obtain optimum strength a 60 – 90 vee preparation is required.

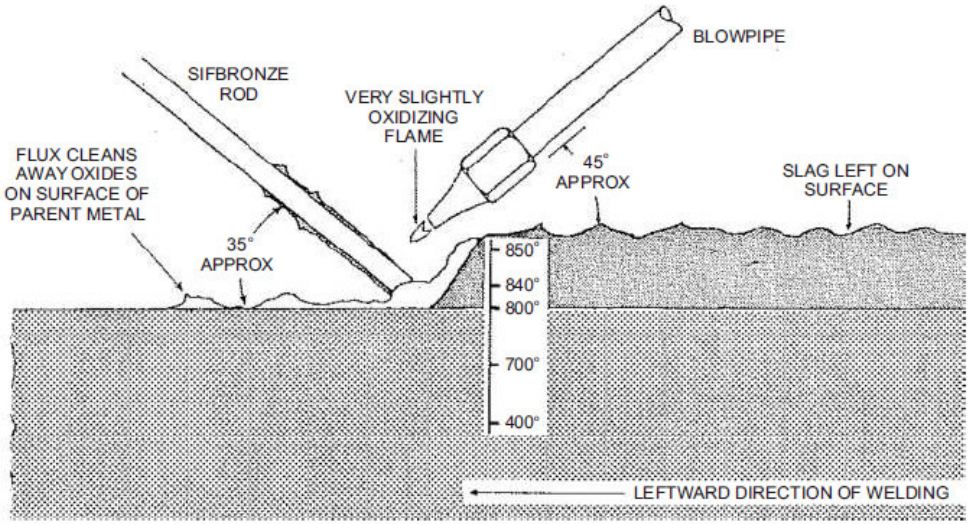
The leftward welding technique is used and the parts should be heated with an oxidising flame to a ‘dull red’, before introducing the Sifbronze rod and flux.

Overheating must be avoided, as this will lead to porosity and inferior work.

It is essential that the joint faces are tinned. A drop of Sifbronze appears to collapse and spread across the metal face. If the drop stays as a globule, the metal is either too hot, too cold or dirty.

The gap between the tinned faces is now filled with a weave action. It may be necessary to carry out further ‘weld runs’, building up the joint.

Sifbronze flux plays an important role not just cleaning the metal, but it covers the weld pool surface, preventing further oxidation of the molten bronze.



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.

a joining force since Sif 1925


Carbonising Flame - For aluminium, stainless steels


Neutral Flame - For mild steel and general welding


Oxidising Flame - For welding brass and ‘Sifbronzing’

Brazing and Sifbronzing are similar in one respect; both processes rely upon bonding of parent metals for joint strength. In the case of ferrous alloys, no fusion of the parent metal takes place. The principle difference are:

	Sifbronzing	Brazing
Composition	60Cu, 40Zn alloy with small additional elements	60Cu, 40Zn alloys, Copper Phosphorus, Silver Solders
Heating	Typically oxy-acetylene torch	Blowpipe, automatic gas or Electric heating
Joint design	Butt, fillet, lap or tee type	Close fitting joints
Building up	Deposit can be controlled and built up in a controlled manner	Not practical