

# PREVENTING BACK- GOUGING BY SWITCHING TO CERAMIC BACKING



Technical advice in the traditional SIFTIPS style which started in 1932.

## What is CeramiBac?

CeramiBac is a modular ceramic weld backing system which is supplied as sectional strips, pre-aligned on a self-adhesive aluminium backing tape to allow secure, accurate positioning on the backside of the weld joint.

The use of CeramiBac allows the use of increased welding currents as the ceramic tiles fully support the molten weld pool guaranteeing a sound root profile and eliminating the risk of burn through.

In turn, the increased current with supported weld pool allows increased welding speed to be adopted therefore decreasing arc energy and reducing the heat affected zone.

The adhesive on the aluminium backing tape remains stable under elevated temperatures to ensure that the backing remains in position during the entire welding process.

As the root area is fully enclosed and protected from the atmosphere during the welding process surface oxidation is reduced significantly eliminating the need for any post-weld cleaning process.

CeramiBac is available in a range of profiles to cover a wide range of applications with grooved profiles for single-v but welds, round for double-v butts and fillets and segmented circles for elliptical joints such as manways, nozzles and branches.

In most instances, the use of CeramiBac makes it possible to remove back gouging and re-welding operations. Ceramic backing tiles allow high quality single-sided welding and offer several advantages and can significantly improve productivity by eliminating these additional operations.

## What is Back Gouging?

Back Gouging is the term given to the process of removing weld and base metals from the backside of a weld to take it back to clean.

## Why is Back Gouging needed?

Back gouging procedures are implemented where it is not possible to guarantee the consistency of a weld root. This can be for several reasons but is primarily where the machining of an accurate weld preparation is not economically viable or practically possible.

For example, when using a square butt preparation on thicker materials, the molten weld pool will be too large and would present a danger of burn through. Therefore, a partial penetration weld would be made, then the backside gouged, and second run applied for the backside.

Or, if only hand held grinders are available for applying a single V butt then it would not be possible to guarantee a consistent root profile because the preparation would be inconsistent. Therefore, the backside would be gouged back to clean metal and a second run applied for the backside.

Back Gouging can be carried out using angle grinders, air carbon arc, oxy/fuel or plasma gouging methods all of which offer their own advantages and disadvantages.

TOP: Sifbronze was established in 1925 and is one of the last companies which continue to manufacture welding consumables in the UK, now under the Weldability SIF range.  
BELOW: CeramiBac is available in a range of profiles.

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