





## welcome

Welding is the most important and versatile joining technique. In fields where highest quality demands are required, standard solutions are not sufficient anymore.

Especially in the field of pipeline and narrow gap welding spa welding systems gmbh made customer oriented developments and solutions to its business.

This solutions not only perform highest quality demands but also prolong the service live of used tools and guarantee a fast and safe mechanical handling and therefore increase productivity.

Our predominantly international and also national customers in pipeline- , steel- , plant construction and automotive industry appreciate our quickness, flexibility and creativity in our MIG and SAW welding application spectrum.

Here our unique coated current contact tips and gas nozzles achieve extraordinary good economic and ecologic results. This effect is even increased when using our high temperature strong copper alloy DHCA.

For welding hard to access areas our specially developed narrow gap welding system will ease your work.

When welding pipelines you can use our high quality positioning bands (guide rings) which we build for almost any existing automatic orbital welding system including our new designed latch system.

A brand new and unique automatic orbital welding system with an excellent cost/performance ratio just competed our program line and will be launched to the market.

Further more we offer various products in the field of welding technology. The innovative potential of spa welding systems is still growing.

Combination of different materials and a lean structure ensures a fast solution of today's welding problems.

Michael Kett  
C.E.O.



## article list

Here you will find soon the complete article lists according to our catalog.  
We will offer the lists also on our website [www.spa-welding.com](http://www.spa-welding.com) for downloading.

We can also send you the requested article lists through our online request centre:  
[www.spa-welding.com](http://www.spa-welding.com)

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*spa makes the weld go round.*



## DHCA current contact tips

- **MIG current contact tips**
- **SAW current contact tips**

In comparison to the rods for standard tips which are produced by a melting fusion process DHCA (**D**ispersion **H**ardened **C**opper **A**lloy) is based on PM technology. This composite material is produced by a combination of milling and mechanical alloying. Copper powder together with dispersoid forming agents are intensively milled.

Continuous breaking and cold welding of the powder particles lead to an intimate mixture of the different components. Then a copper based composite material is created with a homogeneous distribution of ultra fine and thermal strong oxides and carbides. As a result a high electrical and thermal conductivity as well as abrasion resistance is guaranteed. The consolidation is done by cold working of the milled powder and hot extrusion of the billets into rods or tubes. Using common processes this semi-finished rods or tubes will be deep injected into an electrolyte copper jacket.

Now we have the feedstock for our contact tips, a hard and thermal resistant core (DHCA) and a high thermal and electrical conductive jacket (ECu).



DHCA current contact tips

DHCA current contact tips offer following advantages:

- thermal strength up to 850°C
- approx. 3 times prolonged service life compared to CuCrZr tips
- highly wear and tear resistant (long hole bore)
- improved electrical conductivity due to an electrolyte copper jacket
- best mechanical strength due to DHCA core

All kinds of current contact tips can be made and supplied out of DHCA composite material. The tips can be also supplied with our approved and unique current insulating and spatter repelling WBC coating.