

# Tradition meets innovation – a perfect symbiosis

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Germany-based UP-Schweisstechnik-Kelkheim GmbH manufactures high-grade arc welding equipment. The company traditionally focuses on submerged arc welding, an established arc welding process. But tradition isn't the only road that UP-Schweisstechnik-Kelkheim GmbH follows. The company also focuses on innovation out of the conviction that "combining our proven techniques with modern technologies will continue to guarantee an optimal solution for your welding tasks." One example of such innovation is the suction hose from Angst + Pfister that vivifies the link between tradition and modernity.

It's not always major seminal inventions that optimize established processes. Angst + Pfister has succeeded in altering a component of the welding equipment manufactured by UP-Schweisstechnik-Kelkheim GmbH to give its customers a competitive edge: Angst + Pfister has replaced the hoses previously used to suction up excess welding flux with one that offers advantages over conventional hoses. The APSOfluid® UNIFLEX™ suction hose stands out for properties that can be described as trendsetting.

## Conventional suction hoses – compromises with consequences

The unmelted flux on the slag that forms in the submerged arc welding process puts suction hoses to a tough test in several respects. The hoses must be very flexible. At the same time, the residual flux has a temperature of more than 100°C and is gritty, and thus puts considerable strain on the interior surface of suction hoses. Ruggedness, high flexibility, temperature resistance and good mechanical resistance to abrasive media – that's the combination of properties you want.

With conventional suction hoses, compromises have to be tolerated with re-

gard to desired performance under the motto: "You can't have everything all at once." It's mainly the hitherto accepted compromise between flexibility and ruggedness that scores poorly. In order to provide sufficient flexibility, the hoses are corrugated inside and out. That's a clear disadvantage: the mechanical resilience suffers because the corrugated interior surface reacts sensitively to the abrasive residual flux. The lifespan of the hoses thus shortens, with all of the attendant undesired consequences such as reduced durability of the welding equipment and thus more frequent machine downtimes and higher maintenance costs.

## APSOfluid® UNIFLEX™ – sleekly suctioned up!

UP-Schweisstechnik-Kelkheim GmbH approached Angst + Pfister with a mission: to find a solution that brings all of the desired properties of a suction hose together all at once without any compromises. Through real-time prototype testing and subsequent clearance by the persons in charge at UP-Schweisstechnik-Kelkheim GmbH, Angst + Pfister succeeded in winning the company over with the APSOfluid® UNIFLEX™ suction hose.

The APSOfluid® UNIFLEX™ hose is extremely rugged, it withstands the temperatures of the heated residual flux and – what's truly exceptional – it has

a smooth interior surface in contrast to conventional hoses. This enabled Angst + Pfister to kill two birds with one stone: the APSOfluid® UNIFLEX™ hose is flexible, making very tight bending radii possible, and at the same time it is much less sensitive to employed welding additives.

## Service through logistics

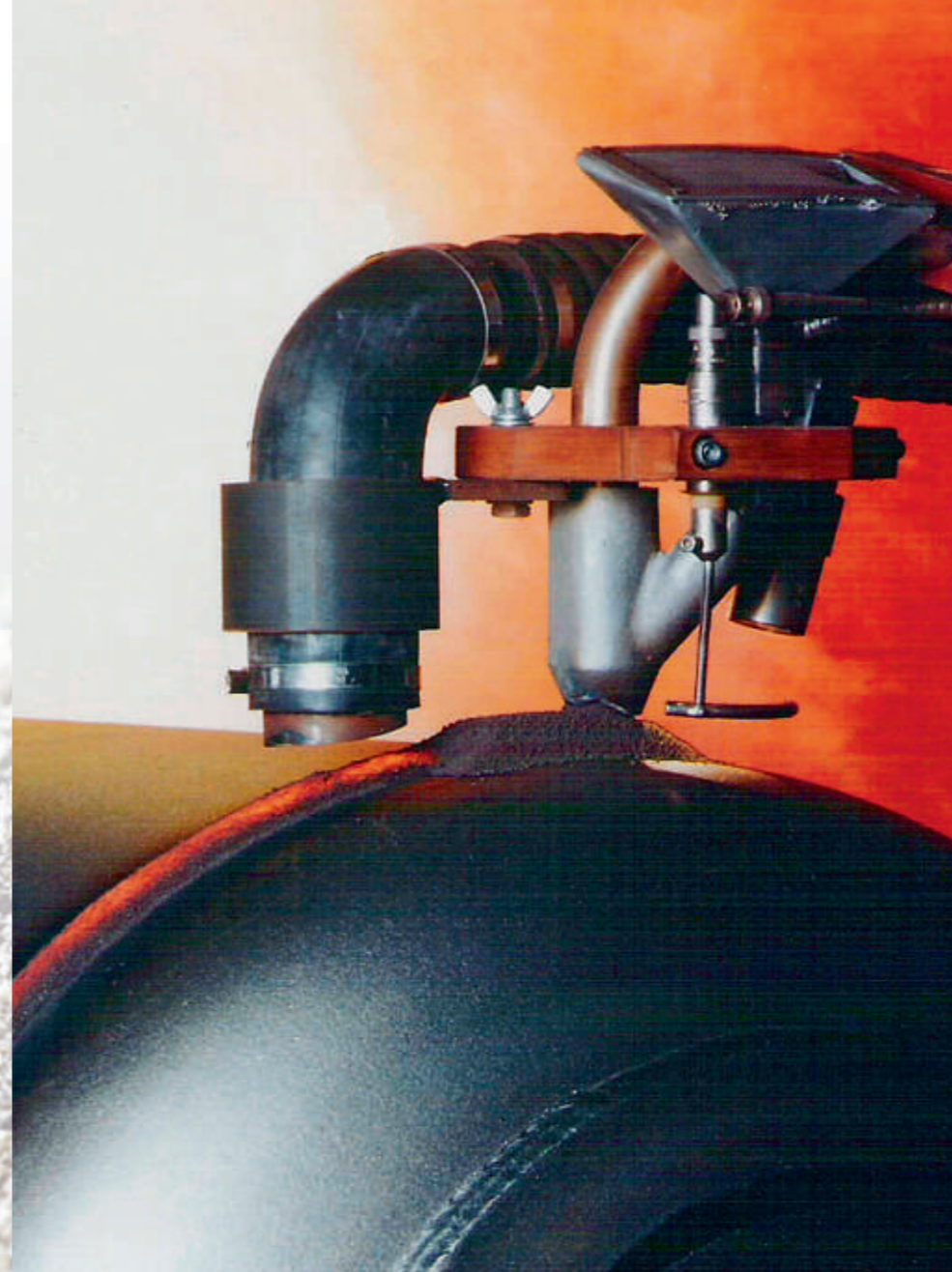
The APSOfluid® UNIFLEX™ suction hose on its own already creates an advantage for UP-Schweisstechnik-Kelkheim GmbH, but Angst + Pfister has even more to offer. A sophisticated logistics setup enables Angst + Pfister to ensure high product availability for the entire range of APSOfluid® UNIFLEX™ hoses, thus minimizing delivery times. This eliminates expensive inventory carrying costs for the customer.

On top of that, Angst + Pfister offers yet another advantage: there are no minimum order requirements. We supply even tiny order volumes and special lengths of APSOfluid® UNIFLEX™ suction hoses at the best pricing conditions. The excellent value proposition of APSOfluid® UNIFLEX™ suction hoses is impressive indeed.

## A detail that makes a difference

The solution that Angst + Pfister devised together with UP-Schweisstechnik-Kelkheim GmbH demonstrates that even seemingly small "side attractions" present the potential to create added value for partners. It also demonstrates that established conventional processes don't have to be old-fashioned – it's all simply a matter of choosing the right partner.

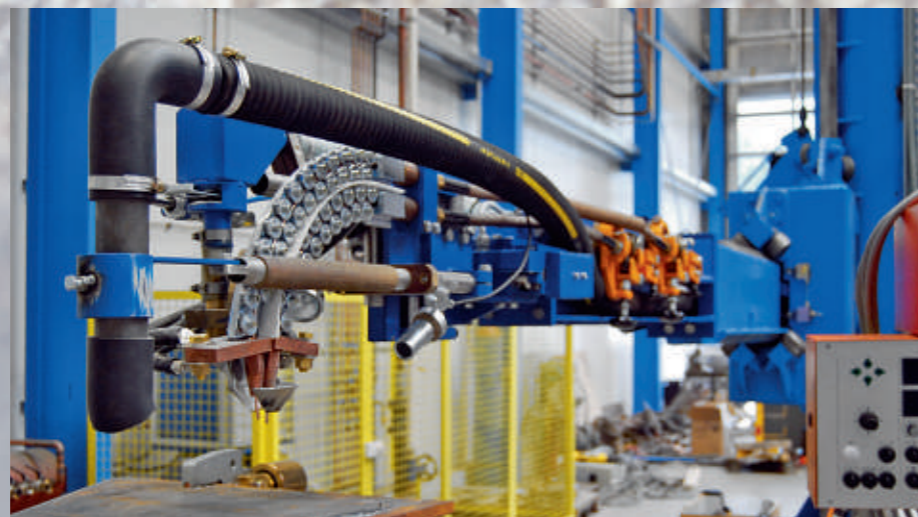
With creativity and commitment, new paths can be forged where tradition and modernity converge – a symbiosis in service of customers.



Submerged arc circumferential welding of containers

Mobile submerged arc welding tractor unit, view of carriage

Tandem submerged arc welder, inner welding head



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