



Press release

September 14, 2009

Aerodag® Ceramishield™ tested by TWI

What's the spatter with you?

Long-term spatter protection for welding equipment – That's what Henkel's Aerodag® Ceramishield™ has to offer. Test performed by TWI and the company's technical welding engineers have showed that spatter build up in the torch was substantially reduced.

Düsseldorf – Providing long-term spatter protection for welding equipment has always been a challenge for the welding industry. The typical 'anti-spatter' products on the market provide short-term protection and spatter is removed either manually or, for robotics, by a cleaning (or reaming) station. Working with Acheson, which was taken over by Henkel in 2008, and their technical welding engineers, TWI (The Welding Institute) has produced some interesting results when performing tests with the Aerodag® Ceramishield™ (previously named Pulve BN D 60A), a ceramic protective dry film coating.

Ceramishield™ has been specifically designed to protect welding consumables, equipment and fixtures and fittings from spatter problems over long periods of time. The product is supplied in aerosol form and is simple to apply.

TWI has carried out robotic welding trials to establish the coating life when applied to torch components and fixtures. Using a mild steel wire with a dip transfer condition and a high 80% duty cycle, the tests showed that spatter build up in the torch was substantially reduced, whereas the uncoated nozzle showed significant spatter build-up. The figure shows a comparison after 75 minutes of welding. After more than four hours of welding, the coating continued to repel spatter without re-application. Any spatter remaining in the nozzle coated with Ceramishield™ could be easily removed and the coating was found to be substantially intact. The coated nozzle lasted more than twice as long as an uncoated nozzle before weld quality was adversely affected by spatter build-up. These tests demonstrated that the routine use of a reaming station to clean the torch, would not be necessary, providing benefits in higher cycle times and costs savings on torch consumables.



The trials also showed the benefits of protecting jigs and fixtures with Ceramishield™. Spatter did not adhere to a coated fixture and after two days welding, the remaining spatter could be swept away with a light brush. This should eradicate problems of spatter interfering with part location in jigs and minimise the labour-intensive procedures of removing the spatter at the end of a shift.

As well as torch components, jigs and fixtures, Ceramishield™ can also be used to protect cables, sensors and the jaws in spot-welding. It is claimed that one coating application could last for up to a week. The results of these tests show that Ceramishield™ is an excellent protective coating solution against spatter problems and the consequent loss of productivity faced in the welding industry.

Henkel has been committed to making people's lives easier, better and more beautiful for more than 130 years. A Fortune Global 500 and Germany's most admired company according to a recent Fortune survey, Henkel offers strong brands and technologies in three areas of competence: Home Care, Personal Care and Adhesive Technologies. Each day, more than 52,000 employees in 125 countries are dedicated to fulfilling Henkel's claim "A Brand like a Friend." In fiscal 2008, Henkel generated sales of 14,131 million euros and adjusted operating profit of 1,460 million euros.

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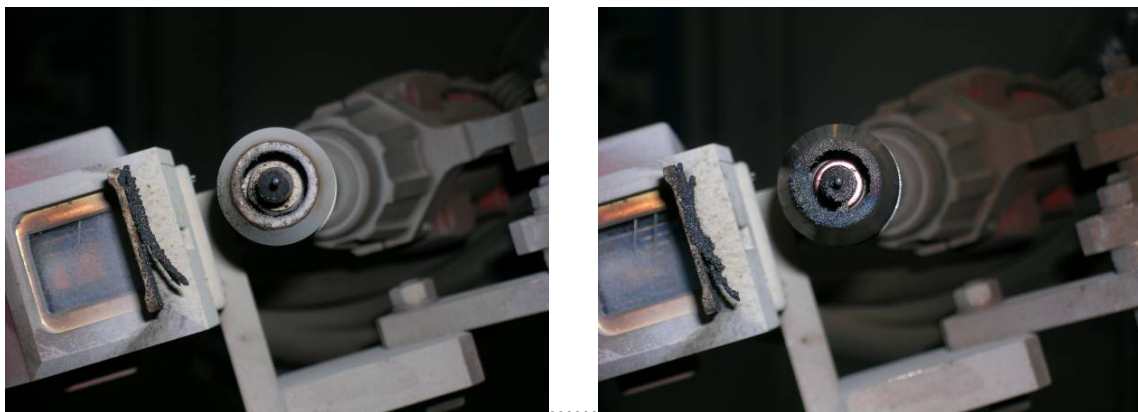
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After 75 minutes of welding the tests showed that spatter build up in the torch was substantially reduced (left), whereas the uncoated nozzle showed significant spatter build-up (right).