

Press release

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Start-up cooperation for novel technology in hydrophobic coatings

Henkel Adhesive Technologies expands expertise in surface treatment

Henkel Adhesive Technologies is further driving its innovation capabilities and leadership forward. As part of its innovation strategy, the Henkel business unit is continuously strengthening its technical scouting and engagement with promising start-up companies. The most recent result is the signing of a joint development agreement with US-based DropWise Technologies Corp.

DropWise, founded in 2014, is headquartered in Cambridge, MA. The start-up company has developed technology, intellectual property and lab-scale manufacturing know how for a novel method of hydrophobic coating applications. The partnership will enable Henkel further expanding its leading position in the global surface treatment business and driving growth with new applications.

“Collaborating with promising start-ups that provide access to cutting-edge future technologies is an integral part of our innovation strategy”, explains Mike Olosky, Corporate Senior Vice President and Global Head of Innovation & New Business Development, Henkel Adhesive Technologies. “Together with DropWise we can combine their unique technologies with our global market access and know-how in coatings to generate profitable growth for both partners in the future.”

Increasing efficiency and lifetime in industrial heat generation

The global coatings market is rapidly changing with increasing demands for new technologies that offer additional functionalities and improved sustainability. Henkel Adhesive Technologies is aiming to drive the transition as first mover and to meet future customer requirements at an early stage. DropWise’s innovation will enable a durable polymer surface with unique properties that offers improved heat transfer.

The DropWise application process is based on an initiated chemical vapor deposition (iCVD) technique which allows the coating to be applied for OEM or retrofit applications. Using just a very small amount of polymer precursors, a chemical



reaction is carried out that covalently grafts an ultra-thin polymer film to any metal surface, such as stainless steel, titanium, copper, aluminum, and even polymers and ceramics. One example use of DropWise's hydrophobic coating is in condensing heat exchangers, where the technology increases the efficiency by eliminating the insulating film of liquid that typically builds up on the surface. Target applications include industrial heat exchangers such as steam condensers in power plants, heating-ventilation and automotive air-conditioning as well as chemical processes. Increasing the efficiency of these systems allows for reductions in fuel consumption, emissions and coolant water use, particularly for thermal power plants, which are the largest contributors to global emissions and second largest consumers of water.

“We are very excited to be partnering with a global leader in metal surface treatment,” says Adam Paxson, CEO of DropWise. “Henkel’s deep technical expertise and strong track record of bringing new innovations to their customers will enable us to fast-track commercialization in key market areas.” DropWise is commercializing the technology out of two laboratories at Massachusetts Institute of Technology (MIT) which has a strong track record of bringing material science-based innovation to the market. Henkel Adhesive Technologies is closely working with MIT to directly interact with start-ups and entrepreneurs.

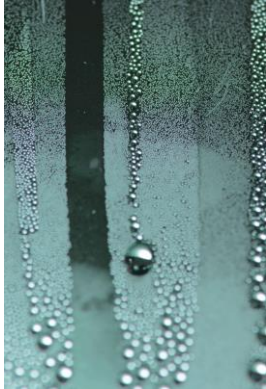
Henkel operates worldwide with leading brands and technologies in three business units: Laundry & Home Care, Beauty Care and Adhesive Technologies. Founded in 1876, Henkel holds globally leading market positions, both in the consumer and in the industrial businesses, with well-known brands such as Persil, Schwarzkopf and Loctite. Henkel employs about 50,000 people and reported sales of 16.4 billion euros and adjusted operating profit of 2.6 billion euros in fiscal 2014. Henkel’s preferred shares are listed in the German stock index DAX.

Photo material is available at <http://www.henkel.com/press>

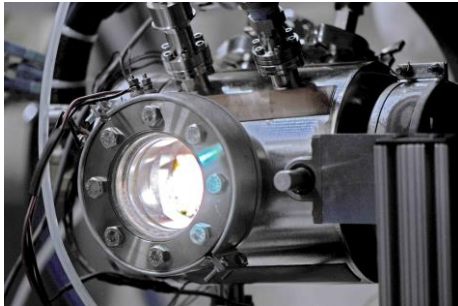
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The following material is available:



Droplet formation on the durable hydrophobic polymer surface



The laboratory condensing apparatus used at Massachusetts Institute of Technology (MIT) to measure heat transfer performance under simulated power plant conditions of temperature and pressure.