



World's first fluoropolymer Up-Cycling plant equipped with emergency shutdown system from HIMA

[Dyneon relies on HIMatrix® safety controller in innovative pilot project for sustainable recovery of raw material](#)

(Brühl, 4 May 2015)

On March 26 in Burgkirchen, Germany, Dyneon GmbH started operating the world's first pilot plant to recycle end-of-life fluoropolymer materials. To safeguard the plant's depolymerization reactor, Dyneon selected a HIMatrix safety controller from safety specialist HIMA as the emergency shutdown (ESD) system. If excess temperatures are reached, the safety system transitions the plant to a safe status to exclude the possibility of risks for people and the environment.

The compact, modular HIMatrix safety controller was developed especially for applications that require from just a few I/Os to several hundred I/Os. Its efficiency, compactness and simple assembly of the various control and remote I/O modules are particular advantages, especially for networked and time-critical applications.

Additional features, such as the capacity for easy integration and flexibility for modifications and extensions, were among the reasons that Dyneon cites for choosing HIMatrix. "Years of experience with the products from HIMA have also given us good reason to rely on their safety technology for this new process technology," explains Martin Neubauer, Project Manager EMSR at Dyneon.

Dyneon uses unique technology for treating wastes to achieve the environmentally-friendly, sustainable recovery of raw material at its new, high-temperature recycling plant in the Industrial Park Gendorf works. Through pyrolysis, the perfluorinated "end-of-life" waste is broken down into monomers, with an extremely high recovery rate of more than 90 percent. The monomers are fed into the distillation system and can be used for the production of new fluoropolymers.

The innovative procedure for "Up-Cycling" residual perfluorinated materials was developed jointly by Dyneon, the University of Bayreuth, and the research institute InVertec, and part of the project was funded by the German Federal Foundation for the Environment (Bundestiftung Umwelt).



Photo 1: At the Industrial Park Gendorf works, Dyneon operates the world's first plant for sustainable Up-Cycling of end-of-life perfluorinated polymer materials.

Source: Dyneon GmbH



Photo 2: A HIMatrix safety controller serves as the ESD system to safeguard the depolymerization reactor.

Source: HIMA Paul Hildebrandt GmbH

About HIMA

HIMA is the world's leading specialist for safety-related automation solutions. HIMA solutions provide maximum safety and maximum availability and can be integrated into any automation environment. During the past 45 years, more than 35,000 HIMA systems have been installed in over 80 countries to protect the equipment of the world's largest companies in the oil, gas, chemicals, pharmaceuticals and power generation industries. In the fields of rail, logistics and machine safety, HIMA solutions are leading the way to increased safety and profitability. The HIMA LIFECYCLE SERVICES concept gives customers an overview of all the requirements of "functional safety" allowing them to always make the right decision at the appropriate time.

For more information about HIMA, please visit: www.hima.com

About Dyneon

Dyneon GmbH, a 3M Company and part of the Advanced Materials Division, is a major supplier of fluoropolymers and is focusing on development, production and sales at its headquarters in Burgkirchen, Germany. The product portfolio of fluoroelastomers, fluorothermoplastics, Polytetrafluoroethylene (PTFE) and plastic additives, is available through the 3M sales organisation or representations in more than 50 countries. For more information please visit www.dyneon.eu

Press contact HIMA

HIMA Paul Hildebrandt GmbH
Daniel Plaga

Albert-Bassermann-Strasse 28
68782 Brühl, Germany
Tel.: +49 6202 709-405
Email: d.plaga@hima.com
Internet: www.hima.de

Press contact Dyneon

Dyneon GmbH
Judith Seifert
Tel.: +49 2131 14-2227
E-Mail: jseifert@mmm.com
Internet: www.dyneon.eu