

Evonik Anticipates New Process to Boost Growth of Hydrogen Peroxide Market

July 24, 2008

Successful Commissioning of First Ever HPPO Plant under License from Evonik and Uhde at SKC, Korea

Alexandra Boy
Corporate Press
Tel.: +49 201 177-3167
Fax: +49 201 177-3030
alexandra.boy@evonik.com

- Innovative HPPO plant for production of propylene oxide from hydrogen peroxide and propylene with an annual capacity of 100,000 metric tons
- First ever commercial-scale application of hydrogen peroxide in propylene oxide production expected to result in annual growth of 200,000 metric tons in hydrogen peroxide market
- Due to its excellent technological position, Evonik expects to profit most from this development in the hydrogen peroxide market

The Korean company SKC of Seoul has started up in Ulsan the world's first ever commercial-scale plant for production of propylene oxide by the innovative HPPO process. The plant has an annual capacity of 100,000 metric tons. Evonik Industries, Essen/Germany, and Uhde, Dortmund/Germany, who jointly developed the HPPO process, have licensed it to SKC. Using a catalyst developed by Evonik, the process produces propylene oxide from propylene and hydrogen peroxide (H₂O₂). The joint venture Evonik Headwaters supplies the H₂O₂ in Ulsan directly "over the fence" to the HPPO plant.

New market for hydrogen peroxide

The commissioning brings Evonik a big step closer to its strategic goal of providing hydrogen peroxide in large quantities for chemical processes such as the HPPO process. Dr. Klaus Engel, member of the Executive Board of Evonik responsible for the Chemicals Business Area, says: "By targeted development of new technologies in collaboration with proven and expert partners, we're opening up an attractive new market for hydrogen peroxide." He expects this first commercial-scale application of hydrogen peroxide in the chemical synthesis of propylene oxide to

Evonik Industries AG
Rellinghauser Strasse 1-11
45128 Essen
Germany
www.evonik.com

Chairman of the Supervisory Board
Wilhelm Bonse-Geuking
Management Board
Dr. Werner Müller, Chairman
Dr. Klaus Engel, Dr. Alfred Oberholz,
Dr. Peter Schörner, Dr. Alfred Tacke,
Heinz-Joachim Wagner, Ulrich Weber

Registered Office: Essen
Local Court: Essen
Commercial Register B 19474

result in annual growth of the H₂O₂ market by 200,000 metric tons over the next ten years. Engel and Helmut Knauthe, Member of the Executive Board of Uhde, are agreed that the production facility in Korea is now a reference point for the construction of further plants using the HPPO process. With an annual capacity exceeding 600,000 metric tons, Evonik is the world's second largest producer of hydrogen peroxide, which has so far been used mainly in paper and pulp bleaching. The annual worldwide requirement for these classical applications exceeds three million metric tons.

Propylene oxide for Asia

SKC supplies propylene oxide produced by the innovative HPPO process to the markets of Korea and its neighboring countries. The Asian market, with a volume of about two million metric tons, is currently growing at about 7 percent per year. Propylene oxide is a chemical with above average sales growth of 5 percent worldwide; the annual requirement exceeds 6 million metric tons. Propylene oxide is used mainly for production of polyurethane precursors. Polyurethanes themselves are processed into, for example, cushioning for car seats and upholstered furniture.

Innovative HPPO process

The advantages of the HPPO process lie in a significantly lower investment volume, resulting in higher profitability than with the conventional production process for propylene oxide. Moreover, the HPPO process is extremely environment-friendly: the yield is high and, apart from water, no by-products are formed in any appreciable quantity. "With environmental regulations becoming increasingly stringent, the novel and by-product free HPPO process is the process of the future," says Helmut Knauthe. Engel adds: "We at Evonik believe that, with our excellent technological position and our HPPO process expertise, we will benefit most strongly from the growth of the hydrogen peroxide market."

Evonik Industries AG
Rellinghauser Strasse 1-11
45128 Essen
Germany
www.evonik.com

Chairman of the Supervisory Board
Wilhelm Bonse-Geuking
Management Board
Dr. Werner Müller, Chairman
Dr. Klaus Engel, Dr. Alfred Oberholz,
Dr. Peter Schörner, Dr. Alfred Tacke,
Heinz-Joachim Wagner, Ulrich Weber

Registered Office: Essen
Local Court: Essen
Commercial Register B 19474

Company information

Evonik Industries is the creative industrial group from Germany which operates in three business areas: Chemicals, Energy and Real Estate. Evonik is a global leader in specialty chemicals, an expert in power generation from hard coal and renewable energies, and one of the largest private residential real estate companies in Germany. Our strengths are creativity, specialization, continuous self-renewal, and reliability. Evonik is active in over 100 countries around the world. In its fiscal year 2007 about 43,000 employees generated sales of about €14.4 billion and an operating profit (EBIT) of more than €1.3 billion.

Disclaimer

In so far as forecasts or expectations are expressed in this press release or where our statements concern the future, these forecasts, expectations or statements may involve known or unknown risks and uncertainties. Actual results or developments may vary, depending on changes in the operating environment. Neither Evonik Industries AG nor its group companies assume an obligation to update the forecasts, expectations or statements contained in this release.

Evonik Industries AG

Rellinghauser Strasse 1-11
45128 Essen
Germany
www.evonik.com

Chairman of the Supervisory Board

Wilhelm Bonse-Geuking

Management Board

Dr. Werner Müller, Chairman
Dr. Klaus Engel, Dr. Alfred Oberholz,
Dr. Peter Schörner, Dr. Alfred Tacke,
Heinz-Joachim Wagner, Ulrich Weber

Registered Office: Essen
Local Court: Essen
Commercial Register B 19474