

## **Innovative Hydrochloric acid electrolysis in Shanghai Oxygen-depleting cathode technology deployed on a large scale for the first time.**

After thirty months of running the first hydrochloric acid electrolysis plant (annual capacity 20,000 metric tons of chlorine) equipped with ODC technology in Brusnbüttel, Germany, Bayer Material Science announced the construction of a new plant in Shanghai with a capacity of 215,000 metric tons per year, for the end of 2008.

This plant will be integrated into the manufacturing line of MDI and TDI, raw materials for polyurethane.

The innovative oxygen-depolarized cathode (ODC) process has been developed by Bayer Material Science together with De Nora North America Inc. and De Nora Tecnologie Elettrochimiche s.r.l. The metallic electrolyser used in the process has been developed together with De Nora Deutschland GmbH, De Nora Tecnologie Elettrochimiche and Uhdenora.

De Nora Deutschland will supply all the electrolysers in the cell room and 75% of the gas diffusion electrodes (GDE) of the new plant. The remaining GDEs will be produced by Bayer Technology Services.

This is the first application on large industrial scale of the electrolytic process for chlorine recovery from aqueous hydrochloric acid using gas diffusion electrodes, a technical innovation in which Industrie De Nora has invested important resources over recent years.