Keeping industrial processes under tight control

ABB is a global leader in analytical devices that measure and monitor the precise quantities of gases, liquids and solids in complex industrial applications – from semiconductor manufacturing to gasoline blending and remote sensing satellites.

Without these advanced analytical devices the production process would have to be periodically stopped while a sample is taken, carried to a laboratory and analyzed. That takes time, reduces process yield and has poor analytical repeatability.

Cutting semiconductor chemical consumption by 30 percent
ABB's Wet Process Analyzer reduces chemical consumption by up to 30 percent in the semiconductor manufacturing process. Based on patented ABB technology the analyzer continuously monitors chemical concentration in a wide range of etching, cleaning and stripping fluids that are used in the wafer cleaning process. The device improves process control, increases throughput and extends the lifetime of chemicals from a few hours to several days.

Revolutionizing the way pharmaceuticals are made
The global pharmaceuticals industry has initiated the PAT (process analytical technology) program to ensure all pharma products are of consistent and repeatable quality. This is to be achieved through continuous online analysis of the manufacturing process.

ABB has developed a uniquely comprehensive and scalable solution for PAT based on its ability to integrate FTIR technologies and various process analytical devices with its industry-leading process control and plant automation platform. In addition to handling huge flows of data and achieving the objective of consistent product quality, the solution increases availability by as much as 40 percent and reduces costs by up to 30 percent.

Precision gasoline blending saves refineries millions of dollars
The complexity of gasoline refining typically results in refineries putting more octane into their products than is necessary. This costs money and reduces profitability. A refinery that produces 95.01 octane instead of 95 octane will "give away" about $6.7 million a year in profit on a production capacity of 200,000 barrels a day.

ABB FTIR analyzers significantly reduce the excess octane. They track gasoline properties precisely during blending to within 0.02 to 0.05 of the correct pump octane, thereby minimizing the octane giveaway and increasing refinery margins.

Low-cost, high-performance analytics
ABB's latest analytics innovation, the MB3000 FTIR analysis system, was launched in 2007 and represents a major technological breakthrough into the market for compact, low-cost, high-performance analytic equipment. It is used in laboratories and industrial processes to analyze chemical components in the final quality control of products.

For more information on these commercial products please visit ABB at

http://www.abb.com/cawp/seitp202/9b3ff9af1f977708c125746d00406a54.aspx