ABB automation and power solutions help Elkem Solar establish production in Norway

Integrated process automation based on System 800xA, safety and power for new silicon production line to maximize capacity while increasing energy efficiency

Oslo, Norway, July 27, 2010—ABB has recently delivered a comprehensive automation and power solution for Elkem Solar's production line at its new facility in Kristiansand, Norway. The new facility will produce highly processed silicon for the global solar cell industry. ABB’s scope of supply includes comprehensive electrical and automation systems integrated on the common System 800xA platform.

Elkem Solar, part of the Norwegian Orkla Group of companies, recently invested $700 million in a new facility, which will produce 6,000 metric tons of high-purity silicon a year. With the new facility Elkem will meet the increasing market demand for high quality silicon for the solar cell industry. Limited availability of such silicon is a major bottleneck for growth in the solar power industry.

The new production line consists of five independent process steps. ABB Norway has delivered all electrical high/low voltage electrical infrastructure to the total plant. ABB's delivery also includes process automation based on System 800xA for two of the process steps.

These process steps contain Elkem developed technology for the purification of the silicon produced. System 800xA will provide precise control of the abovementioned processes, while ensuring safe, reliable operation and optimizing production and energy efficiency.

By integrating power and process systems on the common 800xA platform, customers optimize the design and performance of their electrical and automation systems, improve overall energy efficiency, and see additional benefits in reduced maintenance, engineering and overall lifecycle costs.

The System 800xA solution consists of several operator workplaces, five AC 800M controllers and one AC 800M HI integrity controller for approximately 3000 I/Os, and uses Foundation Fieldbus to communicate with the various types of process equipment throughout the plant. The new process line was put into operation July 2009.

Elkem Solar (elkem.com/solar) is one of the world’s leading suppliers of silicon, which is used in solar power cells that are capable of generating renewable energy for more than 30 years. Elkem’s Kristiansand factory produces solar-grade silicon with one-quarter of the energy required by plants employing traditional technology.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 117,000 people.

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