SECCO contracts
In December 2002, ABB finalized contracts with Shanghai SECCO Petrochemical Company Ltd., valued at approximately US$ 365 million, of which ABB’s portion is approximately US$ 200 million. The scope of the contracts, which will be executed in cooperation with Sinopec Engineering, includes process technology licensors, engineering and procurement services for a 900,000 metric ton per year (MTA) naphtha cracker integrated with an olefins conversion unit (OCT) which will produce a total of 590,000 MTA propylene.

In addition, ABB has also been selected by SECCO to provide technology for a 90,000 MTA butadiene extraction plant and an ethylene/ylene dianine plant. Both installations are part of SECCO’s new US$ 2.7 billion petrochemical complex in Caqing, China. The butadiene extraction unit is based on proprietary technology provided by ABB Lummus Global/BASF, which uses n-methylpyrrolidone (NMP). This solvent is less toxic and more stable compared to other solvents providing the best properties for the separation of butadiene from the mixed C4s resulting in high purity butadiene product and low operating costs. Engineering is underway and start-up is expected for the first half of 2005.

Sechenova awards project management contract to ABB
ABB Lummus Global has licensed the Synthflex/SynSat technology to OMV Aktiengesellschaft for the revamp of an existing diesel hydrotreater unit located at the Schwechat Refinery in Schwechat, Austria. The revamped unit will upgrade a blend of middle distillate gosols to produce a high quality diesel oil via deep desulfurization, density and endpoint reduction, and aromatic saturation. It will also increase the current capacity by 15 percent. The revamp design includes a new reactor system integrated into the existing system in order to minimize unit downtime for modifications. This will enable the majority of the revamp to be constructed while the unit continues to operate.

This revamp is part of OMV’s plans to produce clean fuels at the Schwechat Refinery in Schwechat, Austria. The revamped unit will upgrade a blend of middle distillate gosols to produce a high quality diesel oil via deep desulfurization, density and endpoint reduction, and aromatic saturation. It will also increase the current capacity by 15 percent. The revamp design includes a new reactor system integrated into the existing system in order to minimize unit downtime for modifications. This will enable the majority of the revamp to be constructed while the unit continues to operate.

Feasibility study in Vietnam
The Nghi Son Refinery-Petrochemical Complex Management Board, a subsidiary of Petrovietnam, has awarded ABB Lummus Global the technical consultancy services to prepare a detailed feasibility study of the Nghi Son Refinery-Petrochemical Complex in Vietnam. A pre-feasibility study has been performed which established a refinery capacity of 7 million tons per year based on a mix of Vietnamese and Middle East crudes. The product slate covers a wide range of refinery products ranging from high octane unleaded gasoline through fuel oil and bitumen, as well as polypropylene and polyethylene terephthalate (PET).

The latter would include aromatics and pure terephthalic acid production units to provide feedstock for PET. The detailed feasibility study will advance the project into the next phase and define how it should be developed to ensure a viable operation in the long term. The emphasis of the detailed feasibility study will be to arrive at an optimized refinery configuration to meet year 2038 Southeast Asia product specifications, as well as the demand for downstream petrochemical processing units.

Technology selected by Chevron Phillips Chemical Company LLC
ABB has been awarded a technology license and basic engineering contract by a subsidiary of Chevron Phillips Chemical Company LLC (CPChem) and Saudi Industries Investment Group (SIIG) for a grassroots ethylene monomer (SM) plant to be built in Al Jubail, Saudi Arabia. The unit is expected to start up in 2007.

The unit will employ the CDTECH® catalytic distillation process for the production of ethylene (EB) and the Lummus/UOP “Classic” dehydrogenation process for the manufacture of SM. The “Classic” SM process features a deep vacuum EB dehydrogenation reaction system and it offers significant capital and operating cost advantages. CDTECH EB® provides a unique reactor system for dilute ethylene feedstock.

SYN technology selected by OMV Aktiengesellschaft
ABB Lummus Global has licensed the Synthflex/SynSat technology to OMV Aktiengesellschaft for the revamp of an existing diesel hydrotreater unit located at the Schwechat Refinery in Schwechat, Austria. The revamped unit will upgrade a blend of middle distillate gosols to produce a high quality diesel oil via deep desulfurization, density and endpoint reduction, and aromatic saturation. It will also increase the current capacity by 15 percent. The revamp design includes a new reactor system integrated into the existing system in order to minimize unit downtime for modifications. This will enable the majority of the revamp to be constructed while the unit continues to operate.

Visund contract worth US$ 80 million
Norsk Hydro has awarded ABB Offshore Systems a three year EPIC contract worth US$ 85 million. ABB will design, construct and install two large modules on the Visund oil platform in the North Sea, one containing equipment to increase gas injection rate and raise oil production, the other to allow gas exports from the platform which is located 120 kilometres off the west coast of Norway. ABB will also provide project management. Work starts immediately and is due to be completed in 2005 when the two modules, weighing 670 and 300 tons, are installed on the Visund platform. ABB built the platform for Norsk Hydro in 1999.

Flaring reduced at Mongstad refinery
As a result of a recovery system from ABB, compressors have been started that will halve the amount of flaring at the Statoil Mongstad refinery and reduce CO2 emissions by 42,000 tons annually.

It is expected that the investment costs incurred will be recovered within three years. Gas that was previously burned will now be recovered and used to power a new processing plant for the desulphurization of gasoline that will start operation in April. The technology is based on a StatOil patent which has been used since 1994 to extinguish flaring at oil installations in the North Sea and lately elsewhere in the world. The technology is delivered by ABB Gas Technology, part of ABB Offshore Systems.