Univation Licenses Technologies For World's Largest Single-Train Polyethylene Reactor At Exxon's Singapore Complex

HOUSTON, Texas (September 23, 1997) -- Univation Technologies today announced that its premier technologies - the UNIPOL gas-phase Polyethylene Process, EXXPOL® metallocene catalysts and Super Condensed Mode Technology - have been licensed to Exxon Chemical for its planned new polyethylene plant in Singapore. The plant, scheduled for start-up in 2000, will be the largest single reactor, single extruder PE facility in the world, with an annual capacity of 450,000 metric tons.

Using the UNIPOL PE process will minimize capital investment and operating costs, and will enable the plant to produce a wide range of conventional linear low-density (LLDPE) and high-density (HDPE) polyethylenes. Use of Univation's EXXPOL catalysts by Exxon at Singapore will give the company the leading edge in new market development. With EXXPOL catalysts, the Singapore complex will initially produce enhanced toughness LLDPEs for uses such as trash bags, can liners, stretch film, heavy-duty shipping sacks, flexible packaging, ice bags, frozen-food wraps, liquid and dry powder pouches, processed-meat packaging, poultry bags and diaper backsheets. The complex also will be positioned to extend its production capabilities in the future to other grades, including the eventual substitution of high-pressure, low-density polyethylene film grades with comparable metallocene products to meet a wide range of end-use applications.

The Exxon license includes Univation’s capacity-expanding Super Condensed Mode Technology which when installed initially results in investment and operating costs per unit of production well below that for typical grass-roots construction.

"Exxon's Singapore plant will have access to the latest process and catalyst technology available for gas-phase plants at start-up and beyond," said Greg McPike, CEO and president of Houston-based Univation Technologies.

"EXCEED mLLDPE made from EXXPOL metallocene catalyst technology has been well received by fabricators throughout the Asia Pacific region due to its superior properties. A major portion of the Singapore plant production will be dedicated to these products," reported Will Cirioli, Exxon Chemical's Polyolefins manager, in Singapore. "Univation's on-going R&D is our assurance that Exxon is aligned with the world's foremost developer of polyethylene technology," he continued.

The Asia Pacific region is the world's fastest growing polyolefin producing area and one of Univation Technologies' most important markets where PE demand is projected to grow at 10 percent per year through 2005, double the growth rate for the rest of the world. Total PE demand today in the region is comparable to North America's and exceeds that of Western Europe. PE capacity build-up in the Asia Pacific region is expected to increase by more than one-third by 2000, adding more than 4 million tons of new capacity. Moreover, industry sources predict that by the year 2000 most new PE plants will employ metallocene catalyst, and that by 2005, about 25 percent of LLDPE will be produced with metallocene single-site catalysts.

Citing growth opportunities, McPike pointed out that during the past five years alone, the majority of third-party licensed PE capacity in the Asia Pacific region has been based on UNIPOL process technology. There are 20 UNIPOL reactor lines currently operating in the Asia Pacific area with a capacity of nearly two million metric tons, and another five lines in the region are in various stages of completion. Exxon Chemical was the first producer in the region to license Univation's EXXPOL metallocene catalysts and capacity-expanding Super Condensed Mode technologies.

Univation Technologies is a joint venture of Union Carbide and Exxon Chemical, offering its licensees access to an unmatched portfolio of polyethylene production technologies. These include the world-leading UNIPOL PE process, EXXPOL metallocene catalysts, conventional Ziegler-Natta and chrome catalysts, and Super Condensed Mode Technology for cost-effective capacity enhancements.

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