*Canadian Technology in Action*

*Chemical Recovery*

- **Eco-Tec Inc.** (Pickering, Ontario) supplied the Steel Authority of India, Salem Steel Plant (Tamil Nadu) with a state-of-the-art acid purification system to purify, recover and recycle the nitric and hydrofluoric acids used in stainless steel pickling. The turnkey project, financed through the World Bank, was signed in late 1993 and started up in mid 1994. Eco-Tec recently signed an exclusive distributorship with India's Thermax Ltd. Areas of interest are steel and aluminum finishing, electroplating and water deionization for the power generation industry.

## 5.2 Air Pollution Technologies

*Market Overview and Current Activity*

Air pollution in India is severe, particularly in the country's most congested urban centres. Of the 10 cities in the world suffering from the highest levels of air pollution, three are in India - Bombay, Calcutta and Delhi. Over 2,000 tonnes of pollutants are emitted daily in New Delhi alone, 70 percent of which is produced by vehicles.

Industry is another major source of India's air pollution, with power generation and cement manufacturing comprising the bulk of polluting activities. Over 45 million tonnes of coal ash are produced annually by a wide range of industries and could reach 100 million tonnes by 2007.

Emission standards for air pollutants are set out in the Air Prevention and Control of Pollution Act. Major polluting industries affected by these regulations include integrated iron and steel, oil, fertilizer, chloralkali, thermal power, cement, sulphuric and nitric acids.

India's coal-driven power plants are the largest sources of suspended particulate matter (SPM). Coal-fired thermal power plants that have pollution control equipment use high-maintenance, low-efficiency electrostatic precipitators (ESPs). The cement industry is another major producer of SPM from coal burning and limestone crushing. Some 20 percent of Indian cement plants have no pollution control equipment due to cost or space restrictions. Only about 3 percent of all limestone quarries have installed equipment.

The transport sector accounts for the largest portion (70 percent) of urban pollution and is the fastest growing source of air pollution in the country. The two primary solutions to this are to convert two-stroke engines to four-stroke methodology. The government now requires that all four-wheeled vehicles sold in metropolitan centres be equipped with catalytic converters. Strict lead control standards will be enforced beginning April 1, 1996. There are also now 154 unleaded gasoline retail outlets in major India centres. The installation of natural gas fuel systems for vehicles may also have potential.