The DuPont™ BELCO® wet scrubbing system is just one of the many advanced technologies available from DuPont Clean Technologies, which is dedicated to clean air, fuel and water. Whether you need to reduce particulate, SOx or NOx emissions, formulate cleaner fuels or dispose of liquid waste, we’ll help you find solutions that can lead to increased profitability while meeting environmental regulations. We’re committed to environmental health and safety, while keeping a laser-sharp focus on the innovative processes and products that help keep our customers’ operations running efficiently.

For more information, please contact: Mr. Nicholas Confluerto, Vice president, Technology, Marketing and Sales at Belco Technologies Corporation. Telephone +01 (973) 515-8903 or e-mail Confluerto@belcotech.com

DuPont™ BELCO® Scrubber
ONE OF MANY “FIRSTS”
AT IRVING OIL’S
SAINT JOHN REFINERY

The miracles of science™

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Being the biggest also means striving to be one of the best. That's part of what has driven Irving Oil to achieve a number of "firsts" at its refinery in Saint John, New Brunswick.

The refinery, built in 1960, is now Canada's largest, covering a 780-acre (315 hectare) site. More than 300,000 barrels of quality finished energy products are manufactured there every day. The refinery exports over 80 per cent of its production to the United States, which accounts for 75 per cent of Canada's gasoline exports to the U.S. and 19 per cent of all U.S. gasoline imports.

But getting to be the biggest requires companies to also demonstrate leadership to stay on top. Over the decades, Irving Oil has continued to invest in advanced technology to produce increasingly cleaner-burning, environmentally friendlier fuels.

Almost 10 years ago, Irving Oil demonstrated its leadership when it became the first refinery in Canada to use the world famous BELCO® EDV® Wet Scrubbing System to remove sulphur dioxide (SO2) and particulate matter from their FCCU flue gas.

BELCO® has been at the forefront in the design and delivery of gas cleaning systems used by the global refining industry to reduce particulate matter and toxic component emissions such as sulphur oxides (SOx) and nitrogen oxides (NOx) from their manufacturing processes.

"BELCO® has been working side-by-side with our clients to preserve air quality around the world," says Kevin Gilman, President of Belco Technologies Corporation (DuPont® BELCO®). "Since BELCO® became part of DuPont in 2006, we've been able to combine our technologies to offer our refinery customers with a suite of proven solutions to deal with some of the most difficult challenges, such as sulphur dioxide and nitrogen oxide emissions reduction and sulphuric acid alkylation, regeneration and recovery."

Sulphur dioxide, for example, is formed from the sulphur contained in raw materials during the refinery processes. According to Environment Canada, it can dissolve in water vapour to form acids that can interact with other gases and particulates in the air to form submicron particles and other substances that are harmful to human and animal health and the environment. These other substances cause damage to vegetation, buildings and materials and contribute to acidification of aquatic and terrestrial ecosystems.

Installing a BELCO® EDV® Wet Scrubbing System was part of a solution - identified in consultation with the New Brunswick government - that enabled Irving Oil to meet environmental regulations designed to prevent these kinds of health and environmental impacts.

"As a result of installing the BELCO® scrubber, we were able to reduce our environmental footprint, meet regulatory requirements, and improve our production efficiency and volumes by completing a major upgrade at the refinery," explains Andrew McCoy, Area Manager at Irving Oil.

The overall success of the BELCO® scrubber has led Irving Oil to say that it would install another scrubber if the need arose in the future.

"The scrubbing system has an excellent history of reliability and has enabled us to effectively handle major FCCU carry over events," says Andrew McCoy. "It has also done an excellent job of capturing fine particles and SO2. The lower emissions have helped us to maintain positive community relations with our neighbours."

Since 2003, Irving Oil has invested more than $150 million to produce ultra-low sulphur diesel, which has a sulphur content of 15 parts per million (ppm) or less. That's a 97 per cent reduction from today's industry standard for on-road diesel.

Irving Oil's leadership was also recognized by the U.S. Environmental Protection Agency when it presented the company with a Clean Air Excellence Award in 2003 for its clean gasoline - the first oil company to ever receive such an award.

Global demand for cleaner fuels and cleaner air, along with more sophisticated methods of air pollution control, mean that environmental sensitivity has become a priority with the oil and gas industry. Refiners are handling crude oil with a higher sulphur content than they did five years ago, yet they are required to produce low-sulphur emissions they generate in the process. DuPont science helps them to achieve green success without compromising productivity.
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