Sandvik Materials Technology

The world population is growing exponentially. Over the coming decades, more people will gain access to energy and enjoy higher standards of living. Advanced technology allows us to develop higher buildings, greater cities and even ski slopes in the desert. It comes with a cost, however.

Chris Llewellyn Smith, Director of Energy Research at Oxford University, puts it like this: "The biggest challenge of the 21st century is to provide sufficient food, water and energy to allow everyone on the planet to live decent lives, in the face of rising population, the threat of climate change, and declining fossil fuels. Energy is a necessary means to meet this challenge".

At Sandvik Materials Technology, we aim to meet this challenge at both ends. Our metallurgical expertise and advanced products make it possible to extract and generate energy efficiently in areas like oil and gas and nuclear, but we can also contribute to a safer and more efficient use of energy by providing advanced materials.

Take cooling as an example. Did you know that there are more than 100 million households with air conditioning in the United States? As more people can afford higher standards of living, the number of air conditioners in the world increases. It takes a lot of energy to cool things down. Refrigerators and air conditioners are actually the largest consumers of energy in American homes today.

As the consumption of cool air rises, the drive to reduce energy usage has led many manufacturers to search for alternative materials for new low-energy applications. Many countries have also introduced legislation aimed at reducing energy consumption. A major refrigerator compressor manufacturer in China contacted us when redesigning its compressor valves. The company was looking for a material with high fatigue strength combined with high performance. Sandvik Hiflex™ strip steel helped the company reach its goals. The change is assumed to reduce the country's electricity consumption by around 25 TWh per year. That's enough energy to power one million Swedish homes for a whole year!

Cooling is just one example of the many energy challenges facing us. Our 2,700 researchers globally are continuously developing new materials for products designed to meet those challenges. We do this because we believe in a world where our materials technology can make a difference, by making industrial processes safer and more efficient, while consuming less resources.

SANDVIK

Company details:

Name:	Sandvik Materials Technology
Address:	Storgatan 2 Sandviken
Postcode:	SE-81181
Country:	Sweden
Phone:	0046 26 260000
Fax:	0046 26 251710
Email:	internet.smt@sandvik.com
Website:	www.smt.sandvik.com