

Stimulating innovation and anticipati

Inventing new products and manufacturing processes, using new technologies, developing personalized solutions for and with our customers, protecting innovations with patents ... these are the foundations of Nexans' research and development strategy.

WINNING THE RACE FOR PATENTS

Nexans believes that the management and protection of its patents portfolio represents a strategic part of its business. Procedures relating to the registration of new families of patents are issued on a regular basis with the goal of providing efficient protection for the Group's R&D efforts in a particularly aggressive competitive environment.

MULTIPLYING RETURN ON INVESTMENT

Commercial applications are found for a large proportion of Nexans' research projects within one year of their initial discovery. The efficiency of our R&D operations has led to a large number of new products being commercialized: more than 200 during the past three years.



In 2001, Nexans devoted some 50 million euros to research and development. Around 450 researchers, engineers and technicians are involved in our basic and applied research programs.

RESEARCH IS WELL-INTEGRATED INTO THE OPERATING UNITS

R&D activities are carried out at three levels:

- "Upstream" research is centralized and is currently concentrated in two main areas: superconductors and polymers. The brand new 1,500 square meter

international research center in Lyon was officially opened in March 2002 and is home to around thirty experimental researchers.

- "Operational" research is performed by Nexans' 10 competence centers which are specialized in key technologies. Each of these centers transforms the results of basic research into new products and materials. The competence centers are located in different units and countries in order to take advantage of technological developments in key high growth markets. In 2001, they reinforced their close

collaborative relationships: for instance, the centers based at Halden and Calais (high-voltage cables) and at Erembodegem (power cable accessories) are developing specific cables and their associated terminations on a joint basis.

- The third level of R&D is carried out directly on the production sites by the technical departments and their laboratories. It is at this level that our products are individually tailored to the specific needs of our customers and are adapted to comply with local standards. The production

sites also carry out development aimed at improving products that are already commercially produced.

JOINT DEVELOPMENT OF NEW PRODUCTS WITH OUR CUSTOMERS

Nexans' capacity to respond to the changing needs of our customers is fundamental to our competitiveness. In 2001, each of our business lines increased our coordination with the Group's marketing strategy and the development of new products under long-term

ng our customers' needs



ATTRACTING THE BEST BRAINPOWER IN THE WORLD

Nexans' Lyon-based international research center attracts some of the best researchers in the world. This international dimension allows us to benefit from a whole range of different scientific approaches applied by researchers who have been trained in different cultural environments, in order to stimulate the teams' creative potential.

partnerships with certain customers.

- The Energy Division has founded its research on high-temperature superconductors, high-voltage cable insulating techniques, flame-retardant polymers and new polymers, together with the development of products that meet the most stringent environmental standards. As far as superconductors are concerned, Nexans is the only company to have mastered the entire process, from the extraction of raw materials to the production of finished metallic wires.

- The Electrical wires Division is focused on developing new protective varnishes for winding wires.
- The Telecom Division is currently devoting its attention to the technical issues involved in increasing data transmission capacities.

NEXANS COMPETENCE CENTERS

France	Bezons	Telecom components
	Calais	High-voltage cables and insulating materials
	Chauny	Winding wires
	Lens	Copper, aluminum and alloy metallurgy
Belgium	Brussels	Cabling systems
	Erembodegem	Power cable accessories
Germany	Hürth	Superconductors
	Nuremberg	Polymers and compounds for cables
Norway	Halden	High-voltage submarine cables
United States	New Holland	LAN cables