1 Improving products in collaboration with customers, so as to meet new sustainability requirements

Strategy

- **Assisting customers in our main markets where there are rapidly changing requirements relating to sustainability and energy efficiency, particularly the automotive and construction sectors.**

Our product mix has changed in recent years, enabling to meet new requirements in relation to performance and sustainability. As an example, the products of Solvay Advanced Polymers and Solvay Solexis meet stringent requirements relating to thermal, electrical and mechanical resistance.

In more conventional plastics, the emphasis has mainly been on the additives used (with some of the plasticizers and stabilizers in PVC applications being replaced) on developments in production processes (e.g. reducing releases of PFOA, a detergent used in polytetrafluoroethylene manufacture), and on the expected lifetime of formulations for water-supply plastic pipes and window frames. Other improvements have been obtained to prevent releases of gasoline vapor from vehicle tanks, and to extend the lifetime of metallic components by polymer-coating, such as in boat paints containing PVDC.

In our Chemicals Sector, new fluorinated gases have gone into industrial production. A notable example is HFC 365mfc, used for high-performance thermal insulation foams.

In the Pharmaceutical Sector, methods of drug administration have been developed to improve both the efficacy of medication and patient comfort, especially for drugs to treat serious disorders. Notable among these developments are CREON® microspheres of pancreatic enzymes to treat cystic fibrosis, innovative systems to administer the anti-flu vaccine INFLUVAC®, and DUODOPA® to treat Parkinson's disease. Also, it has recently been possible to improve the production processes. These developments have related to extraction of natural raw materials (e.g. pancreatic enzymes), organic syntheses that are more eco-efficient, and production of anti-flu vaccines on cell cultures that avoid using millions of eggs as a substrate.

Apart from the internal innovation programs (see "Investors" chapter), fora on sustainable developpement have been started with some of our customers, notably plastics converters. The idea is to assess together the desirability of pursuing certain potential developments. SolVin holds a competition every three years to award Innovation prizes rewarding innovative and sustainable applications for vinyl products. The 2007 prizes awarded by SolVin, a Solvay-BASF joint venture producing vinyl products, provided special recognition of four advances: the new extrusion technology of Technoplast Kunststofftechnik of Austria, resulting in energy savings of up to 80%; the very large window frames offered by Inoutic of Germany, allowing integration of complex insulation technologies; a system using PVC components, developped by Mario Scheichenbauer, which, following installation on a construction site, enables the steel framework to be put in place and then injected with concrete; and the special recycling prize, awarded to Ceplastik of Spain, recognizing the use of PVC recycled through use of the Vinyloop process as floor-covering products ■

Anti-flu vaccines: innovative and sustainable packaging receives recognition

In 2007, Solvay Pharmaceuticals in Olst (Netherlands) was awarded a silver medal for its new packaging for the anti-flu vaccine INFLUVAC®. The jury rewarded a new syringe-packaging technology that is quick and efficient.

The packaging is completely recyclable, and its reduced size saves space and energy, while reducing the CO_2 emissions associated with transport and with having to be kept in a cold store. Opening the packaging is easy, and it is possible to detect whether it has already been opened.

Targets for 2012

- **Organizing, with representatives from our markets, fora to share information on the challenges presented by sustainability and, in the pharmaceutical field, holding a meeting each year bringing together stakeholders from both Europe and the United States.**
- **Developing partnerships with our customers and our markets, to anticipate developments relating to sustainability.**

2 Product quality serving ecoefficiency in their applications

Strategy

- **Meeting the needs of our stakeholders regarding quality, through the Solvay Performance Model.**
- **Using a high-performing quality assurance system that meets benchmark standards (EFQM, ISO,...).**
- **Ensuring pharmacovigilance and rigorous monitoring of pharmaceutical specialties on the market.**

The commitment to quality and high performance implied by the Solvay Performance Model reference applies to all the Group's activities, apart from joint ventures, whether the activities are carried out by Strategic Business Units, Competence Centers or production units. It has been validated at the highest level of the Group and is characterized by a drive for continuous improvement, based on self-assessment and sharing of good practice, meaning the comparison of existing practices with the best ("benchmarking").

Our performance-analysis procedures are aimed at providing products and services that meet our customers' expectations, doing it efficiently and by introducing improvements to our management systems. This involves continuous improvement of our policies, targets, procedures and organizational arrangements, from manufacture all the way to sale of the products. The Pipelife and Inergy Automotive Systems joint ventures have their own approaches for ensuring quality.

All the products are manufactured in plants meeting relevant standards and the requirements of regulations. They also comply with rules applying to the particular market: ISO 9001, Hazard Analysis and Critical Control Point (HACCP), and in the case of medicinal products Good Manufacturing Practice (GMP).

The great majority of our plants (> 95 %) have received certification or accreditation relating to quality from independent and recognized bodies. When the latest acquired plants – those of Solvay Advanced Polymers, Solexis and ex-Fournier – were integrated into the Group, they were made the subject of action programs for quality. The Devnya (Bulgaria) soda ash production plant, acquired in 1997, has now received ISO 9001 certification ■

The pharmacovigilance program to ensure a swift reaction to help patients in the event of a pharmaceutical safety problem

The USA's Food and Drug Administration (FDA) has awarded Solvay Pharmaceuticals recognition for the company's "exceptional performance in implementing the portal for electronic submission to FDA via the Internet" of statutory information. This provides confirmation of the progress that Solvay Pharmaceuticals has made in submitting reports on the adverse side-effects indicated by patients when they have taken medicinal products.
The result is less paperwork, improvements in safety and security, and improved compliance with procedures. Back in 2004, Solvay Pharmaceuticals was one of the first to move to electronic reporting of pharmacovigilance information to the FDA in the United States and to the European Medicines Agency (EMEA). Pharmacovigilance is the monitoring of safety data to ensure ideal use of medicinal products. It depends on recording, evaluating and reporting on possible side-effects associated with taking medicines. In order to meet the growing requirements in relation to pharmacovigilance, Solvay Pharmaceuticals has entered into a strategic partnership with an external organization.

Targets for 2012

- **Bringing operations acquired by the Group up to Solvay standards of excellence.**
- **Seeking further progress in longevity of plastic products by incorporating higher-performing additives.**
- **Developing an approach that describes the quality of our products particularly in terms of energy efficiency.**