

EN 12012-1, blade granulators
 EN 12012-2, strand pelletisers
 EN 12012-3, shredders
 EN 12012-4, agglomerators
 EN 12013, internal mixers
 EN 12301, calendars
 EN 1612-1, metering and mixing units
 EN 1612-2, reaction moulding plant
 EN 13418, winding machines for film or sheets.
 Finally, the following standard drafts will be subjected to official approval:
 prEN 15067, film converting machines for bags and sacks
 prEN 14886, band-knife cutting machines for block foams.

Besides the efforts to identify harmonized standards apt to illustrate the minimal safety requirements to be fulfilled by machinery for plastics and rubber, it is obviously necessary that these standards are fulfilled by those manufacturing these machines. Everybody knows that in recent

years Europe (and probably the whole world) has been flooded by Chinese products: from simple toys to clothes, from small tools to complex machinery with costs ranging from hundred thousands to millions of euro. Market economy, free circulation of goods and a healthy competition are key principles that remain out of question. Nevertheless, what forced Assocomplast to ask for a stricter control of imports is the (frequent) violation of European safety standards by Far-Eastern competitors. In other words, rules must be the same for all players in the game. Almost all European machinery makers have been complying with these standards since long, even because the Machinery Directive forced them to. Unfortunately, some Chinese-made machinery sold on the European market still is not complying with these standards, often in a very evident way. This is why Assocomplast

signed two years ago a co-operation agreement with the Customs Agency for inspecting injection moulding machines coming from the Far East, and especially from China. Well, after almost 24 months, several injection presses were inspected and, almost in all cases, it emerged that one or more basic safety standards were not respected. Of course, none of these machines was enabled to enter the market without applying the modifications required to comply with the standards under the control of the custom agents. Since imports from China are constantly increasing and in light of the positive experience of this first co-operation with the Customs Agency, Assocomplast decided to continue the inspection on injection moulding machines coming from the Far East and to extend the procedure to other machinery, for instance extrusion lines.



FlowFree, this is the acronym of the oldest project, includes in its consortium 13 partners of 5 European countries. Launched in September 2005, lasting three years, it reached on August 31, 2007 the second year of operation. The project aims at studying and developing a technology that envisages the use of pressurized carbon dioxide in extrusion processes. According to studies and experimental applications of the project, the use of CO₂ reduces the material viscosity during the extrusion process, encouraging greater machine productivity and reducing the process temperature. This application optimizes therefore both the aspects of energy consumption and factors concerning the production of goods. The second year of activity saw the optimization of the prototype extruder and the search for a better quality of the extruded material using the FlowFree technique. Tests performed at the Queen's University of Belfast and at Cesap - where the prototype machine is already in operation and has been used for a complete series of process tests - have made it possible to determine the effects arising from the use of carbon dioxide, regarding both the processing temperature and the physical-mechanical characteristics of the various polymers tested at different levels of pressure. For an initial assessment of efficiency and effectiveness, the results have shown a reduction in viscosity from 10 to 50%, an increase in machine productivity from 10 to 40%, a reduction of temperature from 10 to 30°C and a reduction of energy from 10 to 20%.

www.euflowfree.com

PeptFlow is a project started in September 2006 and lasting three years, in which Assocomplast and Cesap participate together with other 22 partners, including the Universities of Birmingham and Eindhoven, several consulting and training companies and 11 sectorial SMEs, as "end-users" subjects. The project involves the study and development of twin-screw extrusion systems and has the general purpose of helping SMEs in implementing systems to improve efficiency, reduce costs, add higher value etc. The funds allocated by the

Collective projects for the 6th Framework Programme

EUROPEAN RESEARCH

2007 has been the year during which, within the European Community policies, the Seventh Framework Programme for research and technological development, into force for a period of 7 years (2007-2013), took the place of the Sixth Framework Programme (2002-2006). Therefore, over these last five years, FP6 has been the main legal and financial European Union's tool for research funding, with a total budget of 16.2 billion euro (4% of the total EU budget) and the goal to contribute in the creation of what the European Commission has named European Research Area (ERA). An area without borders where scientific resources will be used in order to increase employment and competitiveness in Europe, promoting cooperation among the partners in different countries, to support

technological and scientific development to use research and innovation at the service of other European policies. One of the criteria underlying the functioning of FP6 is the intention to move from the financing of multiple projects to fund programmes consistent for research, leaving the highest possible degree of autonomy and flexibility to the so-called "European research consortia" (which can be joined by universities, research institutes, SMEs, trade associations etc.). All this in order to avoid a fragmentation in the general management of the projects that have been created on the basis of the previous framework programmes and to encourage a better concentration and integration of research at European level. One of the lacks, in fact, which has been brought to the attention of all member states

by the European Commission is the difficulty either of perpetuating the existence of the European research consortia at the end of the project or the difficulty of reaching more easily the "critical mass" in terms of partnership necessary to have a real lasting impact on scientific, industrial and economic level. At the end of this year of transition from FP6 to FP7, the European collective research projects approved by the European Commission - within which Assocomplast (the Italian association for plastics and rubber machinery) and Cesap (the Italian research centre for the development of plastic applications) play an important role in the pan-European consortium structure - are three, created between 2005 and 2006 and relating to the development of innovative technologies applied to plastics.

European Commission amounted to almost 2.2 million euro, used to implement a system which, appropriately, has been called a kind of CAT (computerized axial tomography) for twin screw extrusion lines and which allows to study the behaviour of the polymer (in terms of flow and mixing) inside the machine. Briefly, the project is based on the use of "visible" particles that emit positrons, included in the plastic material submitted to extrusion in order to study the behaviour during the process. Once analyzed and understood the behaviour of the material, it will be possible to optimize the design of twin-screw extrusion lines and make more efficient the production process. The immediate benefits for companies that use such a system are: better and more advanced simulation process, reduction of time and costs for the start of new facilities and more efficient use of material characteristics.

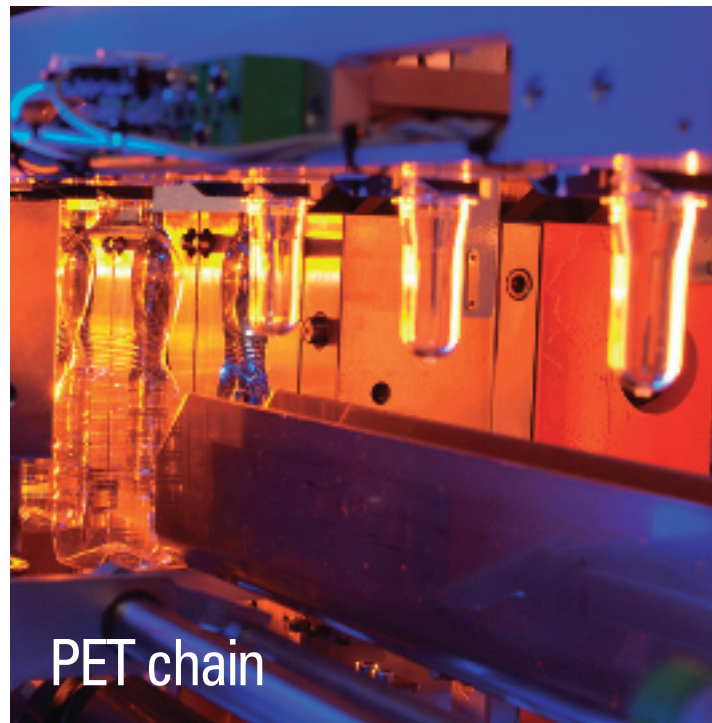
www.peptflow.com

Pro4Plast is a project started in September 2006 and lasting three years, involving 10 European countries, with a consortium of 28 partners. It reaches 180 SMEs through the training and disseminates information about its aims and use to more than 10,000 SMEs across Europe.

The project enjoys the financial support of 2.8 million euro from the European Union, on the basis of an expenditure of almost 5 million euro. Here are the numbers of the third European collective research project to which Assocomplast and Cesap provide support, participating in the consortium activity of "collective research" with the relevant structures. The aim of the project is to provide a systematic approach to reduce the "time to market" for companies devoted to the production of moulds and injection moulding. The development of new technologies involves: a handbook-guide for "the development of the product in order to ensure a systematic approach; an advanced software simulation of injection moulding (multi-component moulding and insert moulding) and an internal system of viscosity measurement, all easily usable by SMEs, as well as a new model for training and

implementation of SMEs which includes a certification. The expected results concern a reduction of production costs (30%) and "time to market" (50%). To this end the 11 SMEs participating in the consortium will test the effectiveness and applicability of new technologies in daily production.

www.pro4plast.net



PET chain

SIPA

The latest PET Day organised by GSI (Global Service International) in Artimino (Florence, Italy), welcomed almost 150 owners and representatives of companies operating all over the world in business lines of PET packaging and - as a novelty - of polyester fibres and nonwovens. The leitmotiv of the presentations was innovation, such as meant in its full scope: creation of new ways to compete in a more and more demanding market. At the end of the meeting, as usual, participants were involved in the topic of prices. Actual 2007 prices were compared with last year forecast, variances were discussed and there was the collective exercise of forecasting 2008 prices, on the basis of a common evaluation of the raw materials costs.

During the morning, three lectures outlined the strategic

market outlook and consequent purchasing strategies. The presentation focused on three main points:

- changes occurring in the worldwide location of production capacities, different growths of consumption in various areas and the anti-dumping actions of the EU will cause a repositioning of the import flows into the European market
- PET is a commodity and its purchases must be managed consequently, favouring always the most competitive sources
- due to the volatility of prices, choosing the correct timing for buying is an essential part of PET users' strategy.

The afternoon session, dedicated to PET packaging and chaired by Andrew Noone (PCI), started with the presentation of four "success cases" regarding innovations in the areas of process, marketing/promotion, products and packaging, explained by the companies who achieved them.

As for process innovation, Matteo Zoppas (San Benedetto, Italy) introduced an aseptic filling line for PET bottles. Designed and built by Sipa, the line envisages the utilization of standard PET in bottling liquid foods (milk, fruit juices etc) which would otherwise require a sterilization process at temperatures higher than those tolerated by PET. An innovation in marketing/promotion was presented by Eva Podlich of Danone (Germany): a line of mineral water (Volvic, presently marketed in Germany and Japan, and soon to be introduced into the Italian market) whose proceeds will be partly handed over to Unicef, in order to fund the research of new water resources in the most underdeveloped countries. A multilayer PET bottle for UHT milk was presented by Raffaele Bombardieri (Granarolo, Italy) as a product innovation. The realization of this special packaging makes possible the application of the high temperatures that are required in this process. But the real innovation of the multilayer bottle for the aseptic packaging of UHT milk is that it offers a barrier to light for a product with shelf life of 90 days. Finally, a packaging innovation

perspectives of the market from different angles. Edwin Choi (TPT Petrochemicals, Thailand) presented an exhaustive survey on the worldwide market of polyester raw materials (PX, PTA, MEG). The latter are of prevailing strategic importance for polyester, due to the high impact of their costs on the value of the finished product (80% for the preforms), because these costs, as a consequence of worldwide overcapacity, become a key factor in price formation. Great interest aroused from the presentation of Hector Camberos (DAK Americas), outlining the most innovative development trends in polyesters. The company inherited technologies and market experiences from DuPont, precursor and former world leader in polyester. Enlightening, as always, the speech of Francesco Zanchi, founder and CEO of GSI, who dealt with next year's PET