

# POLYPLASTIC SCIENTIFIC RESEARCH INSTITUTE

by Alexander Kryuchkov and Elena Kalugina



Business dynamics of our company is defined by development of polymer market in our country and the world.

Only a short time ago POLYPLASTIC was a scientific and production company involved in design and development of polymeric composite materials. There was only one R&D Centre equipped for traditional plastics testing and it was enough.

10 year on, our company developed a science-based pipe division and established PLASTIC, another R&D Centre in 2002. Today Management of POLYPLASTIC Group takes a decision to establish a Scientific Research Institute based on two R&D Centres. This decision is not only a tribute to the trend of the country's largest companies which create Scientific Centres (e.g. YUKOS R&D Centre opened in 2004, SIBUR Research Organisation opened in 2006) but a well-considered move.

POLYPLASTIC Group today has 13 pipe plants and 3 polymer compounding plants located in 4 former USSR countries. Deployment of new equipment and new types of materials

require meticulous scientific, technical and technological study. In the USSR these studies were done by Industry Scientific Research Institutes. Presently there are no such organisations in our country. Academic Institutes established to teach fundamental concepts are not pre-

pared for handling of applied problems.

The objectives of the POLYPLASTIC Scientific Research Institute (head – Alexander Kryuchkov, Candidate of chemical sciences, Chief) are as follows:

- handle of scientific research, technological and design works directed to improve POLYPLASTIC Group and POLYMERTEPLO Group production processes;

- improve product quality and develop new types of product and materials for POLYPLASTIC Group and POLYMERTEPLO Group;

- provide information support for production and technology personnel (employed by all plants).

The POLYPLASTIC Scientific Research Institute (PSRI) has Departments: Research and Development of Plastic pipes, Technology and Implementation of New Products, Materials Research, and Standardization and Certification.



Department for Research and Development of Plastic pipes is headed by Igor Grozdev, a leading specialist in pipe industry. The department has three divisions: gas, pressure and sewer pipes; specialist expertise; and heating pipes. The department is based on all research of PLASTIC R&D Centre: materials research, design engineering, technology process and new technologies for all pipes, GOST requirements development and participation in ISO Technical Committee 138. All employees from the PLASTIC R&D Centre now work for this department.

Department of Technology and Implementation of New Products managed by Sergey Samoilov, consists of two most vital (design and technological) divisions and has the following purposes:

- conduct design engineering to enable the modernization of existing manufacturing processes and facilitate the production of new types of products;
- provide recommendations on design of new equipment purchased by POLYPLASTIC and POLYMERTEPLO;
- consolidate technology experience in bespoke products, welding methods, pipe joining, moulding, technological, processing and new products and technologies implementation;
- training of the technology and production personnel of the Group.

Department of Materials Research managed by Prof. Elena Kalugina is founded on the basis of Department for Physical and Chemical Studies of POLYPLASTIC R&D Centre. The department has two divisions:

- structure and property research of polymeric materials which provides physical and chemical research, aging and stabilisation studies on polymers;
- physical-mechanical and rheological research.

This department will provide composite research for POLYPLASTIC Group.

POLYPLASTIC Scientific Research Institute will develop academic activity. Academic Department of Chemistry and Technology of Plastics and Polymeric Composites (founded in 2007) of Lomonosov Moscow State University of



Fine Chemical Technologies is now part of POLYPLASTIC SRI. The Academic Department will provide qualification No.250601 – “Manufacturing process of plastic and composite material products”. The programme provides technical training for engineers, offer Master degree in dedicated programmes of POLYPLASTIC Group and carrying out scientific research for a dissertation. Students of dedicated programmes will receive grants from POLYPLASTIC Group. Most of the graduates will be employed by the Group.

Department for Standardization and Certification managed by Larisa Soldatenko, consists of two divisions: Cer-

tification & Standardization and Quality Control. They handle product certification, formulation of codes and guidelines, updates and formulation of technical requirements, adaptation of regulatory documents at manufacturing plants, project technical support, the formulation of quality control documents, internal auditing and project management of laboratories of the Group in accordance with GOST R 17025.

This young team includes leading industry specialists and is actively recruiting young people with initiative and strong problem-solving skills who want to work within the speciality.

