Investigation and development of a new generation of machines for the processing of composite and nanocomposite materials - NEWEX

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1. Introduction

In April 2016 in accordance with H2020-MSCA-RISE-2016 call, an application was submitted to Research Executive Agency of the European Commission to finance the project. The application was approved and evaluated at 96.2%, which qualified it for financing. The project is planned for 48 months and began in January 2017. The budget of the project is 1.305.000 Euro. This project is one of 35 of this type realized in Poland and one of 8 in which Polish institution is a leader and coordinates the whole project.

2. Abstract of the project

The main research goal of the NEWEX Project is the construction and testing of the new innovative extruder. By the application of a new, patented concept of vital parts: innovative active grooved feed section (IAGFS), original rotational barrel segment (ORBS) and special screw (SS) a completely new breakthrough technology of extrusion and plasticizing systems will be achieved. It will ensure manufacturing the products of improved properties and will enable processing materials that couldn’t be processed so far, as well as food materials, cosmetics and pharmaceuticals. In parallel to the main RTD activities the NEWEX project is aiming at industry-academia cooperation and transfer of knowledge between organizations from central-eastern and Western Europe.

All the project’s activities will be performed by thoroughly planned secondments and appropriate hosting institutions between industrial and academic partners. The workplan consists of 7 Workpackages, out of which: WP1-4 focus on the investigation of extruder, extrusion process and extrudate properties and tasks aiming at the selection of the best solution of new extruder vital parts, then construction and testing of a new generationextruder. WP5 concentrates on networking activities (workshops, training, knowledge exchange, etc.). WP6 aims at knowledge dissemination (participation in conferences, fairs, publications, etc.), WP7 is dedicated to management and administration of the whole project. The
consortium consists of 6 organizations: 3 representing academic partners and 3 representing industry partners. The project is coordinated by Lublin University of Technology (Poland). The Partners are: Technical University of Kosice (Slovakia), University of Minho (Portugal), Zamak-Mercator LLC (Poland), SEZ-Krompachy a.s. (Slovakia) and Borra s.r.o. (Czech Republic).

The realization of NEWEX project will foster the real industry-academia cooperation which is of the key importance in terms of European Research Area development strategy.

3. Personal contact

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