

Nov/Dec
2009

PEPT-Flow Newsletter

Project Consortium

SMEs

CESAP	http://www.cesap.com
COLOREX	http://www.colorex.nl
EXTRICOM	http://www.extricom.de
EXTRUDER EXPERTS	http://www.extruder-experts.com
GENESIS	http://www.genesisps.co.uk
MAPEA	http://www.mapea.com
POLIMER TEKNIK	http://www.polimerteknik.com
RCT	http://www.rctsr.com
ROSSETER	http://www.e-nanoscience.com
SCC	http://www.sccconsultants.com
TREFFERT	http://www.treffert.org

Research Organisations

EINDHOVEN UNIVERSITY OF TECHNOLOGY	http://www.mate.tue.nl
FRAUNHOFER-ICT	http://www.ict.fraunhofer.de
SMITHERS RAPRA	http://www.rapra.net
UNIVERSITY OF BIRMINGHAM	http://www.bham.ac.uk

Associations

ASSOCOMPLAST	http://www.assocomplast.org
CCIAA	http://www.mi.camcom.it
BPF	http://www.bpf.co.uk
GKV	http://www.gkv.de
PAGEV	http://www.pagev.org.tr

PEPT-Flow has also been supported by:

LEISTRITZ
<http://www.leistriz.com/extrusion/de/index.html>



BRABENDER
<http://www.brabender-technologie.com>



For more information on the PEPT-Flow project, please visit our website:

<http://www.peptflow.com>



The PEPT-Flow project is supported by funding under the Sixth Framework Programme of the European Union. Contract N° COLL-CT-2006-030191.

About the project...

The PEPT-Flow project aims to apply the flow analysis technique of positron emission particle tracking (PEPT) for investigation of polymer flow and mixing behaviour within industrial twin-screw processes, determining the influence of machine design, process operation and polymer system.

The results generated will be used to establish knowledge-based machine design criteria and operation guidelines, and to further develop both new and existing commercial simulation and modeling software.

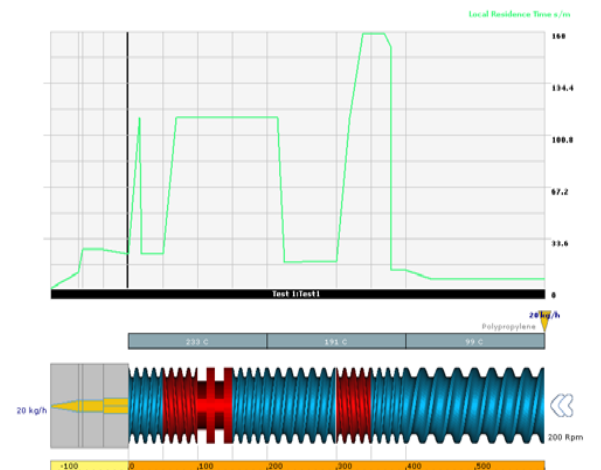


Advances in Twin Screw Understanding A *Free* PEPT-Flow Seminar

9th December 2009
Holiday Inn Frankfurt City South

The PEPT-Flow project partners would like to invite you to a seminar which represents the culmination of over three years work and provides a chance for the consortium to share their successes and achievements with the public.

The seminar will provide an overview of the project, details of the results achieved and their possible applications in the real world via the development of industrially based case studies.



this issue

PEPT-Flow Seminar – 9 Dec 2009 **P.1**

PEPT-Flow Seminar Programme **P.2**

Ludovic Simulation Software **P.3**



A horizontal research activity involving SMEs (Collective research) Part financed by the European Commission under the Sixth Framework programme

Talks will be given by members of the project from a variety of European research organisations, academic institutions and small enterprises, including **Smithers Rapra (UK)**, **University of Birmingham (UK)**, **University of Eindhoven (Netherlands)**, **Fraunhofer-ICT (Germany)** and **Sciences Computeurs Consultants (France)**.

The talks that will be given include:

- **Introduction to the PEPT-Flow Project**

- Overview of the strategic aims and objectives of the project and how the project intends to tackle these issues.

- **Twin Screw Extruders**

- Discussion relating to the choice of experimental machine and the current approach to screw design.

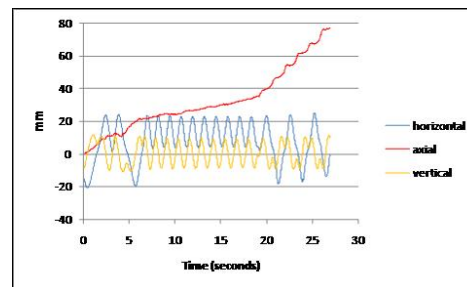


- **What is PEPT?**

- An explanation of the Positron Emission Particle Tracking (PEPT) technique and how it can be utilised.

- **Initial PEPT Results**

- A summary of the work completed, illustrated by tracer plots through different screw configurations.

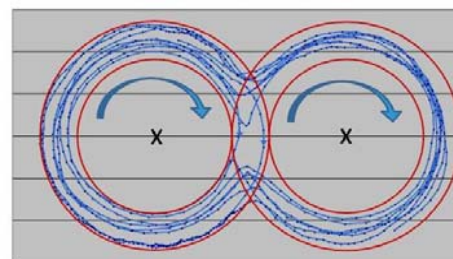


- **Creating a Model for Twin Screw Extruders**

- How the PEPT-Flow results can be used to develop a model of the twin screw extruder.

- **Existing Ludovic Simulation Software**

- How this software has incorporated the work of PEPT-Flow and ways to use Ludovic.



- **Case Studies**

- Highlights from some of the industrially based case studies undertaken during the project.

Interested?

If you would like to come along, meet the members of PEPT-Flow and learn more about the project and its achievements, then please visit the project website in order to download the registration form – www.peptflow.com. Please click on the 'Events' link.

Ludovic Simulation Software Free Trial Available

What is Ludovic?

Ludovic is a simplified programme that will simulate the performance of a co-rotating twin screw extruder. It enables you to define your screw and barrel profile as well as the polymer and the running conditions of your process. Once the basic elements have been defined then different items can be modified to enable an optimum design to be reached. Graphs of various parameters can be presented showing the variations along the length of the extruder. These include temperature, residence time, pressure, energy input, and degree of fill etc.

The latest modification also gives a value for the intensity of mixing along the screw profile which is based upon the output of 3D modeling carried out at Eindhoven University.

How to trial

Trial software is available from Sciences Computeurs Consultants that will allow a limited number of simulations to be carried out via the internet. This is for a limited time period only so please apply quickly for your trial account.

Please contact **Laurent Ratte** - lratte@scconsultants.com for further information and to request a trial.

