



## Market Monitoring Newsletter

ARMO'S ROTATIONAL MOLDING NEWSLETTER

jeudi 18 novembre 2021

### Machinery & Process

#### **SPHERE OVEN SO 1.60 - Automatic and efficient rotational molding**



Sphere Oven, the first rotomoulding machine with spherical oven developed by Rotoline, brings high-performance innovation to the small rotomoulded parts market. It is the first rotomoulding machine with a spherical oven, without doors and allowing a more homogeneous air flow, with less heat loss and being even more efficient. (Video in Spanish)

Click here to read more : [www.youtube.com](http://www.youtube.com)

### Research & Patents

#### **ROTOMOLDING COMPOSITIONS WITH LOW RELATIVE ELASTICITY**

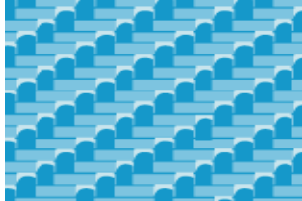


High density polyethylene compositions having a high flow index and a bimodal composition provides an outstanding combination of processability, stiffness and ductility in

rotomolded articles. The compositions have a low relative elasticity ( $G'/G''$ , measured at 0.05 rad/sec) of less than 0.03.

Click here to read more : [worldwide.espacenet.com](http://worldwide.espacenet.com)

### **Experimental and Numerical Analysis of Mold Filling in Rotational Molding**



This work focuses on the development of a numerical mold filling simulation for the rotational molding process. In the rotational molding process, a dry fiber preform is placed in a mold and impregnated with a thermoset matrix under rotation. Additionally, metallic load introduction elements can be inserted into the mold and joined with co-curing or form-fit, resulting in hybrid drive shafts or tie rods. The numerical model can be used to simulate the impregnation of the preform. Based on the resin transfer molding process, an OpenFOAM solver is extended for the rotational molding process. Permeability, kinetic and curing models are selected and adapted to the materials used. A wireless measurement solution with a capacitive sensor is developed to validate the model. Comparisons between measurements and numerically calculated impregnation times to reach the capacitive sensor with the matrix show good quality of the developed model. The average deviation between calculated result and measured mean values in the experiment is 43.8% the maximum deviation is 65.8% . The model can therefore be used to predict the impregnation progress and the curing state.

Click here to read more : [www.mdpi.com](http://www.mdpi.com)

### **METHOD FOR THE CONTINUOUS PRODUCTION OF A COMPOSITE MATERIAL PROFILE SECTION FROM THERMOPLASTIC POLYMER HAVING HIGH FLUIDITY**



The invention relates to a method for continuous production of a composite material profile by injection-pultrusion from at least one reinforcing fabric and at least one thermoplastic polymer having high fluidity, said method being characterized in that: i) said fabric is continuously pulled with a pulling speed of at least 0.4 m.min<sup>-1</sup> in the course of said process; ii) the impregnation stage is performed by injection of a polymeric composition having high fluidity through the fabric; iii) the profile is then shaped with a specific thermal profile. The invention also relates to a profile obtained according to the method of the invention and a composite article comprising such a profile the curvature whereof may be modified in its curvature by bending and/or its profile by rotational molding.

Click here to read more : [worldwide.espacenet.com](http://worldwide.espacenet.com)

## Rotomolding Market News - Europe

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### **Introducing a Unique and Colourful Range of Playground Furniture**



AMV would like to introduce a collection of adaptable and multifunctional playground furniture that caters to all ages and key stages. As part of the Bailey Street Furniture Group we have expanded suppliers to now include the Danish group Outsider who take a truly unique and playful approach to external furniture, perfectly suited for the educational sector. These products offer a variety of solutions from seating to landscaping, dining to exercise, and more, all carefully selected to expand our offering to elevate playgrounds and external space. Utilizing a clear Scandinavian design philosophy the family of products feature cohesive forms from sustainable materials with distinctive colours. The Loop range of rotationally moulded plastic offers is a versatile, durable and lightweight range of modular products that interconnect forming organic and functional spaces inviting users to interact and engage. The Loop has a textured/granulated surface due to abrasive blasting of the mould. This process enhances the friction and makes the surface comfortable and safe to use.

**Click here to read more :** [www.amvplaygrounds.co.uk](http://www.amvplaygrounds.co.uk)

### **Atelier Composite: a French success story**



Specializing in the sale and repair of oars and other nautical gear, Atelier Composite is riding on the success of its business. The company, created 3 years ago after taking over the assets of Pageot Aviron, is expanding and continues to recruit despite the Covid-19 crisis. Exclusive reseller on the French territory of the Salani, Swift Racing and Croker Oars brands, Atelier Composite continues to develop by proposing since the beginning of the year a polyethylene initiation boat named First Evo. Made in France, it is manufactured by its partner Rotomod, the European leader in kayak manufacturing and a specialist in roto-molding. Finally, to improve the quality of life at work, the company has moved into its new 1,100 m<sup>2</sup> premises, in Carquefou, in the West of France. The workshop and storage area has been doubled, thus avoiding unnecessary handling of boats weighing up to 140 kg. (Translated from French)

**Click here to read more :** [nantes.maville.com](http://nantes.maville.com)

## Rotomolding Market News - North America

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## **Bevanda Offers Personalized Coolers and Drinkware Designed for the Construction Industry**



Newly founded company Bevanda offers exclusively made Coolers, Roto-molded coolers, and Drinkware for working folk and contractors. The design and structure were centered around the construction industry and its requirements. Bevanda is quickly growing thanks to its top-of-the-line injection molded and rotomolded coolers.

**Click here to read more :** [www.ktvn.com](http://www.ktvn.com)

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