



## Market Monitoring Newsletter

ARMO'S ROTATIONAL MOLDING NEWSLETTER

jeudi 29 juillet 2021

### Events

#### **Rotoplas 2021 will be held this september**

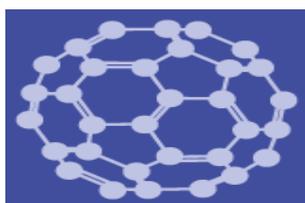


Rotoplas, the largest exposition for the rotational molding industry, will be held September 20-23 at the Donald Stephens Convention Center in Rosemont, IL, USA. Presented by the Association of Rotational Molders (ARM), Rotoplas is held in conjunction with the ARM Annual Meeting, which features top-notch industry presentations, educational workshops and professional speakers.

Click here to read more : [www.rotoplas.org](http://www.rotoplas.org)

### Research & Patents

#### **Anomalous Terminal Shear Viscosity Behavior of Polycarbonate Nanocomposites Containing Grafted Nanosilica Particles**



Viscosity controls an important issue in polymer processing. This paper reports on the terminal viscosity behavior of a polymer melt containing grafted nanosilica particles. The melt viscosity behavior of the nanocomposites was found to depend on the interaction between the polymer matrix and the nanoparticle surface. In the case of polycarbonate (PC) nanocomposites, the viscosity decreases by approximately 25% at concentrations below 0.7 vol% of nanosilica, followed by an increase at higher concentrations. Chemical

analysis shows that the decrease in viscosity can be attributed to in situ grafting of PC on the nanosilica surface, leading to a lower entanglement density around the nanoparticle. The thickness of the graft layer was found to be of the order of the tube diameter, with the disentangled zone being approximately equal to the radius of gyration ( $R_g$ ) polymer chain. Furthermore, it is shown that the grafting has an effect on the motion of the PC chains at all timescales. Finally, the viscosity behavior in the PC nanocomposites was found to be independent of the molar mass of PC. The PC data are compared with polystyrene nanocomposites, for which the interaction between the polymer and nanoparticles is absent. The results outlined in this paper can be utilized for applications with low shear processing conditions, e.g., rotomolding, 3D printing, and multilayer co-extrusion.

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

### **Improving the labour utilisation in the product finishing process**



The goal in this case study to make better use of the employees by improving their labour utilisation. The theoretical framework consists of a combination of the Systematic Handling Analysis, the lean principle and the rotational moulding production process. The research involves a literature study to decrease the walking distances and choose the right handling equipment to implement. Calculation of the required time per activity for several workstations during one shift is required for establishing a new task division and thereby improving the labour utilisation. A new division of tasks requires the implementation of the new handling equipment. The best solution for the company consists of visualising the inbetween stock by using roller conveyors and have the finishing activities and the packaging activities grouped into two big workstations.

**Click here to read more :** <https://polyvia.kbplatform.com/source/445768/>

### **Rotomolded Vertical Farming Apparatus and System**



A growing system is provided that includes a rotomolded chassis that defines (i) an "interior" where plants are/may be located, and (ii) an "exterior" that at least partially defines a perimeter around the interior. The chassis generally includes stacking elements which allow one chassis to be stacked one upon the other. The disclosed growing system also generally includes (i) means for delivering liquid into the chassis, (ii) means for draining liquid from the chassis, and (iii) means for supporting plants that is conducive to their growing within the chassis.

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

## Rotomolding Market News - Asia

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### **What are the benefits of custom stainless steel slides?**



What are the benefits of custom stainless steel slides? Traditional plastic sliders are mostly rotomolded by fixed abrasive tools, which belong to mold production. Due to the limitations of abrasive tools, their size and shape lack changes, and cannot meet the installation requirements of some unconventional sites. The emergence of stainless steel slides can just reverse this situation. It can break through the limitations, adapt to local conditions, and adapt to various on-site installation and debugging.

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

### **Wenling Risingsun Rotomolding Technology Co.,Ltd : Our technology has gone to Cambodia to assist the customer to install the rotomolding machine**



According to our customer's requirements, we made drawings, built the machine, tested it, exported the machine, and help our customer throughout its installation.

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

## Rotomolding Market News - Europe

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### **How rotomolding benefits from the latest innovations in industrial branding**



Rotational molding is used to manufacture hollow or multi-walled polymer parts. While it has many advantages, it can now benefit from personalization thanks to the installation of transfers, an innovation patented by a French company called TIP Sérigraphie. Thanks to the work of the development teams, several industrial transfers, called ROTO-TRANSTIP, have been developed to meet all the needs in this field (internal applications in the mold or external applications on a finished part after rotational molding). These are self-adhesive transfers to be placed directly in a mold, aluminum, steel, smooth or grained, as well as on a smooth finished part. Presented on a transparent and protective white support, it offers very good resistance to UV rays, to friction as well as to thinners, oils, gasoline and detergents, supported by a report from our partner laboratories. With a shiny or satin appearance, it can be placed on any type of roto-molded part in PE and PP, the manufacturing method of which accepts a decoration. There are 3 models of ROTO-TRANSTIP® to adapt to each need. Their technical characteristics have many advantages. The manual presentation of a transfer is facilitated and the use of an

additive “such as adhesive spray or adhesive film removal is avoided”. In addition, a hot mold can be used at different levels and produce, with a saving of time on installation, at temperatures ranging from 20°C to 70 °C, without adhesive residue on the part. This is a “MADE IN FRANCE” innovation that allows, without investment, to improve production costs by 5 to 10%.

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

### **Do you want to learn more about plastic sheet working ?**



Do you want to learn more about plastic sheet working ? You can visit our stand at the GLOBAL INDUSTRIE show in Lyon (France), from the 6th to the 9th of september 2021, to learn about what polymers we can work with, meet providers and discover new transformation methods. Synoxis will be sharing its stand with two of his long-time business partners : Team Plastique (thermoforming) and L'Océane des Plastics (rotomolding). (Translated from French)

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

## **Rotomolding Market News - North America**

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### **Trilogy Plastics Inc. adds twelfth rotational molding machine and plans to add another**

14/07/2021



Trilogy Plastics Inc. recently purchased its 12th rotational molding machine and plans to add another in October. According the company, the Ferry 220 machines will help it keep pace with expanding orders in numerous areas. With 2019 sales of \$ 26 million, Trilogy was ranked 19th in the most recently published North American rotary formers ranking by Plastics News. For 2020, the company reports sales of \$ 27 million, and they promise to be even better based on the first half of this year. The two plants of the company, both in Alliance, comprise a total of 286,000 square feet of manufacturing and warehouse space. The company's other markets include heavy trucks, lawn and garden, and marine, among others. It processes low, linear and high density polyethylene with an annual throughput of approximately 9 million pounds. It also offers extensive secondary services.

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

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