



Market Monitoring Newsletter

ARMO'S ROTATIONAL MOLDING NEWSLETTER

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Research & Patents

Study of the miscibility of polymers by the grain coalescence method with a view to recycling WEEE by rotational molding



The objective of this thesis is to investigate the miscibility of polymer blends with a view to recycling polymers from WEEE by rotational molding. Indeed, miscibility is a key factor which conditions the final properties of the mixture. Based on the results of the characterization of WEEE flows from Eco-systems, the choice of study materials (PVDF / PMMA) and (ABS / PC) was motivated by the interest both industrial and scientific of these two pairs. . The first part of the work presents a panoply of experimental methods implemented, ranging from implementation processes to the characterization of materials with the aim of ultimately exploring the miscibility of these mixtures. (Translated from French)

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The development of rotational molding of waste bamboo powder with LLDPE plastic powde



The objective of this study was to assess the effect of bamboo powder addition and the treatment of its surface on the properties and structure of rotationally molded (rotomolded) polypropylene. In this study we can transform plastic and bamboo powder into a product by putting the raw materials into hollow mold and then cover the mold. The mold is rotated along two axes by burning with high temperature to make liquid plastic flows evenly along the inner surface of the mold with gravity. The results of this

research had shown that, by using LLDPE plastic 4 kg, bamboo waste powder 1 kg size of 0.15: 0.30: 0.85 mm tested with humidity 10:15:20% mixed and then molded, it was found that the moisture of waste bamboo powder had a direct effect on molding. If the moisture in the bamboo powder is more than 20%, the work will not be molded. It shown look like a lump. The moisture content less than 15% can be molded as a product. In terms of the size used in this test 0.15: 0.30: 0.85 can be molded well in the range of moisture, not more than 15%.

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Morphological and Mechanical Properties of Bilayers Wood-Plastic Composites and Foams Obtained by Rotational Molding



In this work, the suitability for the production of sustainable and lightweight materials with specific mechanical properties and potentially lower costs was studied. Agave fiber (AF), an agro-industrial waste, was used as a reinforcement and azodicarbonamide (ACA) as a chemical blowing agent (CBA) in the production of bilayer materials via rotational molding. The external layer was a composite of linear medium density polyethylene (LMDPE) with different AF contents (0–15 wt %), while the internal layer was foamed LMDPE (using 0–0.75 wt % ACA). The samples were characterized in terms of thermal, morphological and mechanical properties to obtain a complete understanding of the structure-properties relationships.

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Rotational Molding of Linear Low-Density Polyethylene Composites Filled with Wheat Bran



Application of lignocellulosic fillers in the manufacturing of wood polymer composites (WPCs) is a very popular trend of research, however it is still rarely observed in the case of rotational molding. The present study aimed to analyze the impact of wheat bran content (from 2.5 wt.% to 20 wt.%) on the performance of rotationally-molded composites based on a linear low-density polyethylene (LLDPE) matrix. Microscopic structure (scanning electron microscopy), as well as physico-mechanical (density, porosity, tensile performance, hardness, rebound resilience, dynamic mechanical analysis), rheological (oscillatory rheometry) and thermo-mechanical (Vicat softening temperature) properties of composites were investigated. Incorporation of 2.5 wt.% and 5 wt.% of wheat bran did not cause significant deterioration of the mechanical performance of the material, despite the presence of 'pin-holes' at the surface. Values of tensile strength and rebound resilience were maintained at a very similar level, while hardness was slightly decreased, which was associated with the porosity of the structure.

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Rotomolding Market News - Asia

India : Naveen performs ground-breaking of 17 industrial projects, inaugurates five projects

17/02/2021



Odisha Chief Minister Naveen Patnaik on Wednesday performed the groundbreaking of 17 major industrial projects and inaugurated five projects. The projects are ranging from Metal and downstream, Tourism, Textile and apparel, Cement, Plastic and Food processing sectors. In a major boost to the Make in Odisha, these 22 industrial units with a combined investment of INR 13,311.53 Crore will generate employment opportunities for 10,677 persons in the state. One of the project is the manufacture of plastic tanks and rotomoulded products at Chhatabar, Khordha by Lisa Plastics against an investment of INR 3 crore which will generate potential employment opportunities for over 40 persons.

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Rotomolding Market News - Europe

France : Mobilis, a world-class niche in the Agenais region



Mobilis has set up two production sites in Bon-Encontre, France, where the company manufactures signaling and mooring equipment for use in the sea. When the CEO of Mobilis is asked why he launched himself into the niche of signaling equipment at sea, François Juniet responds bluntly: "It's genetic. My grandfather was a director of lighthouses and beacons on the Mediterranean, and my father developed the buoys for the first beach beacons. But I dreamed of traveling instead, and I created Mobilis to produce, and above all, to export. "Mobilis' floats are made by rotational molding, and the company also designs its own molds. (Translated from French)

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Venus is the new collection designed by @wanderswonders for @VONDOMSpain



Venus is the new collection designed by [@wanderswonders](https://twitter.com/wanderswonders) for [@VONDOMSpain](https://twitter.com/VONDOMSpain). The process used for its creation is rotational molding, which is a technological process that guarantees the final products has the best quality. (Translated from Spanish)

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Rotomolding Market News - North America

Working Iowa: Centro Inc. hiring about a dozen people



This week's 'Working Iowa' brings us to the Centro Incorporated custom rotational molding manufacturing plant in North Liberty. Workers make custom parts for big companies like John Deere and Caterpillar. The manufacturing team consists of machine operators, who actually mold the parts, in addition to product inspector finishers.

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Each ABI Water Tank is rotationally-molded and fully drains for easy cleaning



Each ABI Water Tank is rotationally-molded and fully drains for easy cleaning. Add some bleach and allow the mixture to soak and drain completely and your ABI Water Trailer is clean!

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