



Market Monitoring Newsletter

THE ESSENTIAL NEWS OF ROTOMOULDING WORLDWIDE

New president for Gemstar Manufacturing.



Gemstar Manufacturing has named Mark Hedin as President to continue to drive the company's growth after significant advancements in product offerings, manufacturing capabilities, and capacity. Headquartered in Cannon Falls, Minnesota, Gemstar Manufacturing, has been a solutions-focused manufacturer of protective hard cases and custom OEM parts for 60 years.

Mark Hedin has championed for the continued investment in the Gemstar brand as it continues to fuel growth and increase its market share in the hardcases and custom parts industry segments. The recent appointment of Hedin as President of Gemstar exemplifies the organizational growth and continued investment in the Gemstar division. Among these investments is Gemstar's exclusive Robomold technology. This technology provides precision custom part solutions with fully automated capabilities, allowing Gemstar to produce cutting-edge part solutions, such as unique geometries and multi-layer products not available in conventional rotational molding. Gemstar is proud to be the first manufacturer in the United States to offer robotic rotational molding. Over the two years, Gemstar has developed and released more than 115 new hard case sizes and configurations, has doubled its manufacturing facility, invested in two new rotational molding ovens, and just recently brought in a new 5-axis machine in addition to its current equipment.

<https://www.gemstarmfg.com/gemstar-president-hedin/>

Pentas is expanding its facility.



Pentas Moulding has announced that the company in the midst of expanding its existing facility. An 1.700m² will be added to its premises.

This additional space will be utilized for both production and storage. For this project, Pentas is collaborating with respected partners such as contractor Hams en Jansen Bouw B.V., Doeschot B.V., and Van Kooten Dak- en Installatietechniek BV. Thanks to their expertise and dedication, the company is on track to successfully complete the expansion

by week 45.

https://www.linkedin.com/posts/pentasrotomoulding_we-are-excited-to-announce-that-we-activity-7116026753109643264-wf9S

Grupo Rotoplas donates water tanks.



In Mexico, Grupo Rotoplas has teamed up with AMART (Abierto de Mujeres en el Arte), an initiative to promote women in the arts, to donate artist-decorated water tanks to the communities of Chilon, Chiapas, in need of water and sanitation.

Grupo Rotoplas recognises the role of women in these communities, and would like to thank the artists who collaborated on this first activity.

https://www.linkedin.com/posts/grupo-rotoplas_nos-unimos-con-amart-para-donar-tinacos-activity-7118706492643409920-7Jp9

Prac. cal advice from Australian company Halgan.



Working with rotomoulding ovens all day is no easy feat. More so when temperatures soar outside, as it's a few notches higher next to the ovens.

With summer just around the corner in Australia and the temperatures beginning to rise, wearing personal protective gear makes the working atmosphere more safe and manageable for the Halgan's staff.

From a hot summer day last year at our Queensland factory, two operators are wearing their body cooling vests and head bands with temperatures peaking at 38.65°C in their

work area.

https://www.linkedin.com/posts/halgan-pty-ltd_halgan-manufacturing-queensland-activity-7117664381814931456-bl9W

Groupe Maillard Industrie launches fully-equipped VELO PAUSE station.



At a recent congress on public transport in France ("Rencontres Nationales du Transport Public"), Groupe Maillard Industrie presented its brand new concept for cyclists: the VELO PAUSE station. This fully-equipped station offers a wide range of services to cyclists and cycle tourists, thanks to equipment specifically adapted to cycling.

This service area responds to the high expectations of cycle route users, and helps attract new visitors to cycle routes. The VELO PAUSE station can be installed without civil engineering, in an urban or rural setting, as a stand-alone unit or connected to all networks.

This functional equipment is aimed at local authorities wishing to enhance the attractiveness of their cycle routes, to set up complete areas on their territory and to offer relevant and sustainable services to local residents and cycling tourists. This concept, unique in France, has been developed by two French companies: Groupe Maillard Industrie, a European leader in the manufacture of sanitary, comfort and rest modules for public transport drivers; and Panocolor, a market leader in the manufacture of urban signage and bicycle shelters.

https://www.linkedin.com/posts/groupe-maillard-industrie_la-station-velo-pause-un-concept-unique-activity-7119700887727415296--rgV

Polymerlink meets Rising Sun Rotomolding Machinery



A Polymerlink team has visited Rising Sun Rotomolding Machinery a few days ago. Rising Sun is glad that Polymerlink attaches great importance to the Chinese market.

There are more than 10,000 rotomolders in the Chinese market, and Rising Sun believes their XL PE have great market potential.

https://www.linkedin.com/posts/risingsunrotomoldingmachinery_risingsunrotomolding-rotomolding-rotationalmolding-activity-7120721141597392896-fb7s

Research & Patents

Mechanical Performance of Rotationally Molded Multilayer mLDPE/Banana-Fiber Composites



The incorporation of materials different from the polymer within the rotational molding process usually results in lowered mechanical properties, where impact strength is of particular concern.

In order to overcome this issue, multilayer structures of virgin polyethylene (PE) and banana fiber composites were prepared to determine the impact of the different layers on the performance of the final part. Cycle time has been studied to identify the influence of the addition of fibers in the process.

The tensile, flexural and impact properties have been analyzed, finding improvements in Young's modulus of up to 13%, although at the expense of significant decreases in impact strength. A reduction in the fiber size due to the pulverization process was observed, which affected the rheological and mechanical behavior of the composite. The beneficial effects of working in multiple layers have been demonstrated in this work, where composites with up to 5% of banana fiber have been produced in two-layer structures. Finally, the need to add neat polyethylene in the external layer is also highlighted as a way to counteract the reductions in mechanical properties, particularly for flexural elastic modulus and tensile strength, and this also helps with the drop in impact behavior to a lower extent.

<https://www.mdpi.com/1996-1944/16/20/6749>

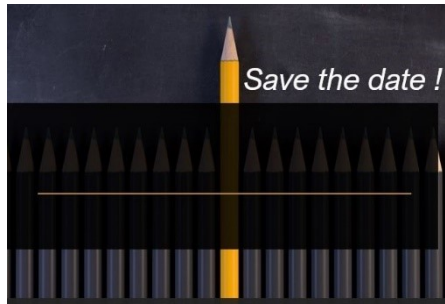
A new automatic method for demoulding plastic parts using an intelligent robotic system



This paper presents a new intelligent robotic system capable of performing the demoulding task of the entire toy manufacturing process by carrying out the most labour-intensive part of the process. Therefore, this approach directly reduces the stress and potential injuries to operators who can perform other dexterous and human-based tasks.

This system is composed by the usual machinery of the toy manufacturing process (rotomoulding oven, air cooler, moulds, etc.), external devices such as RGB-D cameras, pneumatic actuators, emergency buttons, and safety laser scanners, and a UR10e collaborative robot arm. The intelligent robotic system with the integrated camera detects the pieces in the mould using a developed vision-based algorithm and extracts them by means of a custom gripper located at the end of the robot. All mentioned devices and machinery have been integrated at INDUSTRIA AUXILIAR JUEMA S.L., an actual doll manufacturing company. This automatic method has been successfully implemented in a real toy factory providing a novel approach in this traditional manufacturing process. The paper describes the robotic system performance using different forces and velocities, obtaining a success rate of more than 90% in the experimental results.

<https://link.springer.com/article/10.1007/s00170-023-12466-y>



28/29 November 2023
[Master Class AFR](#)

28/30 January 2024.
[StaR 2024 Annual Conference & Trade Show](#)

