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Abstract

Foam heating process techniques and its impact on cellular micromorphology

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Abstract:
This study mainly concerns the role of foam heating process techniques and its impact on cellular micromorphology, density and gas liberation mechanism of natural rubber foam with distilled water as blowing agent. Three different modes of heating process techniques and varying amount of distilled water have been examined on the foam density and cellular morphology, having rather identical morphological formation, cell distribution and relatively reducing densities but significant cell wall thickness. It is deduced that the increase in the water loading substantially affects the decrease in the foam densities, cell uniformity and stability. However, the heating process techniques influence the cell distribution and stability more than the amount of water content loading. The combine microwave oven process technique has improved the process of moisture diffusion into the water-blown open cell natural rubber foam unlike the slower procedure of conventional heating technique. In addition, the natural rubber foam physical properties and microstructure is improved better than the conventional heating technique. In all the simultaneous combine microwave oven technique is the best among the evaluated technique for the experiment because of density increment, cell distribution, pores flaccidity and uniform cells.

Biography:
He designed and started experimenting with his dynamic emitter. He has published about 100 papers in reputed journals. He has collaborated with several international organizations including NASA.

Publication of speakers:
1. Explosion of the light stimulated by wave supercompression and synthesis of elements. 9-th International Conference on Modern Problems of Nuclear Physics and Nuclear Technologies. 24-27 September (2019) at Institute of nuclear physics of Uzbekistan academy of science.
2. The Phenomenon of the Powerful Explosion of the Light. 7-th International Conference on Modern Trends in Physics Research. 20-24 April (2019) at Cairo University.

International Webinar on Advance Material & Nanotechnology; Zurich, Switzerland; June 22, 2020

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