Enhance The Thermal Properties Of Poly-propylene

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Abstract

This project is about enhance the thermal properties (melting point, crystallization, thermal stability and thermal conductivity) of Polypropylene polymer (PP) by mixing with metallic powder (copper). Polypropylene (PP), was mixed with different percentage of copper powder separately by using the polymer extruder facilities in RCYCI research center. The metallic powder percentages were 3%, 6%, 10% of the total mass of polymer and compared with the pure PP, and the test was conducted at different voltages. A linear heat conduction machine was used to test the samples with different voltage 9-volt, 11-volt, 13-volt, 15-volts. Also, Differential scanning calorimetry (DSC), and thermal gravimetric analysis (TGA) were used.

Nawaf almohamdi is a student of Mechanical Engineering in Maintenance Systems and Bachelors of Science in Industrial Engineering in the design, maintenance and analyses Department of Mechanical Engineering at a Yanbu industrial college, Yanbu, KSA. He earned Diploma in Mechanical Engineering from Yanbu Industrial college Engineering and Technology, Saudi Arabia, graduation Secondary school in Systems and from belal bin rabah,. He has completed the training in Marafiq company and conference papers. nawaf has completed research projects with Khaled and Majed, New Center Stamping, Whelan Co., Progressive Metal. His research interests include manufacturing, simulation, optimization, reliability, scheduling, manufacturing, and lean. He is member of IEOM, INFORMS, SME and IEEE.

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