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Investigating the Effects of Injection Molding Parameters on the Mechanical Properties of Recycled Plastic Parts Using the Taguchi Method

Nik Mizamzul Mehat & Shahrul Kamaruddin

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principal experiment. By adopting L₉ Taguchi OA, the parts made from recycled plastic were produced by injection molding. ANOVA confirms that the most significant factor for flexural modulus of a recycled toolbox tray is injection time (~40.49% percentage contribution). For stress at yield, the most significant factor is melt temperature with percentage contribution of about 43.34%.

Keywords: Flexural modulus Injection molding Recycled plastic Simulation Stress at yield Taguchi method

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