Effect of molding condition on mechanical properties of FRP by RTM

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In general, it was considered that mechanical properties of FRP should be same if reinforcing fiber and matrix, reinforcements and surface treatment were same whatever molding method was, however it was revealed that mechanical properties were influenced by molding method. In this study, some kinds of GFRP with different surface treatment and molding pressure were molded by resin transfer molding and static tensile property and crack propagation behavior were investigated. It was found that the decrease in the tensile modulus had relation to the interface properties due to the surface treatment, but didn't have relation to the molding pressure. Whereas, the crack propagation was restrained by higher molding pressure when the interface properties were low. Whatever the interface properties were, fatigue characteristics were improved as molding pressure got higher.