

Design and Validation Process for GMT Composite Load Floors

Fred Deans

Azdel, Inc.

Amy Conover

GE Advanced Materials

Abstract

GMT composite load floors have been molded for many years for domestic and import vehicles. With the rise in popularity of SUVs, there is a higher demand for these applications. Load floors have structural load / deflection requirements, which could ideally be addressed by lightweight GMT thermoplastic "chopped-fiber" composites. These GMT materials can use the compression molding process that places fiberglass in ribs, bosses, and other load floor features. Using FEA techniques, GMT load floor designs can be optimized for weight and performance before tooling and actual part testing is required.