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	2019
	Effects of Reduced Pressure, Casting Design and Heat Transfer Resistance of Liquid Resin on Mold Filling in Expendable Pattern Casting Process of Aluminum Alloy
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	The effect of coat permeability on the melt velocity of molten aluminum alloy in the expendable pattern casting process was investigated. The application of the reduced pressure condition and use of high permeability coats led to higher melt velocities. In the high coat permeability region, the experimental values of the melt velocity were lower than the calculated values. By considering the heat transfer resistance of the liquid resin at the EPS surface to the mold filling model, even in the high coat permeability region, the experimental values of melt velocity showed almost good correlation with the calculated values.