

RESUMO N° 12

MOULD FILLING SIMULATION USING FINITE POINTSET METHOD

Felix R. Saucedo-Zendejo, feliks@live.com.mx

The Technological Institute of Saltillo, Mexico

Edgar O. Resendiz-Flores, e.resendiz@gmail.com

The Technological Institute of Saltillo, Mexico

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In this work we propose the use of Finite Pointset Method (FPM) to simulate mould filling in casting processes. This approach has significant advantages over traditional finite element (FEM) or volume of fluid (VOF) mesh-based methods, which are widely used in casting industry. Unlike traditional mesh-based methods, Lagrangian meshless methods such as FPM can simulate free surface flows in highly complex geometries, as those presented in real problems of casting industry. The details of this approach and two and three dimensional simulations for different geometries are presented.