

HDC casting machines for aluminium The objective of this study is to investigate bleedouts in Horizontal Direct Chill casting process and to make a complete finite volume model of such process. The casting ingots. The casting machine that was investigated and used as a reference for the numerical model, was the HDC casting machine at Alcoa Fjarðaál in Iceland Direct-chill casting of aluminum alloys is a well developed technology with a rather long history [1, 2, 3]. In this study, we tried to simulate and optimize HDC casting to overcome these challenges Chills are typically made of cast iron, but It has been observed that chill has a significant impact on properties of the cast specimens. Because of its horizontal nature and gravity efects, controlling HDC casting still remains a challenge. An experimental study has been conducted on carbon steel WCC (ASTM A/A M WCC) ball valve body casting using ms chills. At the same time, despiteyears of extensive research and practice, the formation of structure, defects and properties of billets and ingots produced by direct-chill (DC) casting is still not completely understood This article investigates the effect of mild steel chills on steel casting in sand mould to minimize shrinkage defects. The finer grain structure and better mechanical properties were observed by controlling internal chills on properties and microstructure of aluminium alloy castings using cylindrical form of the chill of the same material; evaluating effects of temperature For general information on other Wiley products and services or for technical support, please contact the Wiley Customer Care Department within the United States at (), outside the United States at () or fax () Library of Congress Cataloging-in-Publication Data is available. In this investigation four parameters are considered namely chill distance, chill thickness, pouring Horizontal direct chill (HDC) casting is one of the important manufacturing processes for producing aluminum billets. Others are increasing water chill ing in direct-chill casting, employing the electroslag remelting process and making billets by compacting atomized liquid Horizontal direct chill (HDC) casting is one of the important manufacturing processes for producing aluminum billets. This article investigates the effect of mild steel chills on steel casting in sand mould to minimize shrinkage defects The objective of this study is to analyze bleed-outs in Horizontal Direct Chill (HDC) casting process by using a finite element model (FEM). Grandfield, John The objective of this study is to investigate bleedouts in Horizontal Direct Chill casting process and to make a complete finite volume model of such process. Because of its horizontal nature and gravity eects, Chills are used to support enhanced rate of solidification in sand castings mainly to reduce porosity and improve mechanical properties.