Record Nr. UNINA9910462512103321 Aluminium cast house technology XI: selected, peer reviewed papers **Titolo** from the international conference, organised by the CAST CRC, on behalf of the aluminium industry: it was held from 13-16 September, 2009, on the Gold Coast, Queensland, Australia / / edited by J.A. Taylor, J.F. Grandfield, A. Prasad Zurich:,: Trans Tech Publications Ltd.,, [2010] Pubbl/distr/stampa ©2010 **ISBN** 3-03813-344-2 Descrizione fisica 1 online resource (254 p.) Collana Materials science forum, , 0255-5476 ; ; volume 630 TaylorJohn A <1969-> (John Alexander) Altri autori (Persone) GrandfieldJohn F PrasadA (Arvind) Disciplina 669.722 Soggetti Aluminum Aluminum castings Electronic books. Lingua di pubblicazione Inglese Materiale a stampa **Formato** Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and indexes. Nota di contenuto Aluminium Cast House Technology XI: Preface; Committees; Sponsors; Table of Contents; Industry Directions; A Historical Review of the Developments in Casthouse Technology and a Peek into the Future; Hydro Casthouse Reference Centre; Safety & Environment; Recent Developments in Australian Aluminium Casthouse Personal Protective Clothing; Greenhouse Emissions in Primary Aluminium Smelter Cast Houses - A Life Cycle Analysis; Dross Generation & Handling; Predicting Dross Formation in Aluminium Melt Transfer Operations; Furnace Operations to Reduce Dross Generation; Dross Processing Technology Automated Metal Siphoning and Cast House Energy ConsumptionTechnological Researches Concerning a Decrease in the Losses Due to the Oxidation of Remelted Scrap from Aluminium Alloys; Furnaces & Refractories; Furnace Operation: "A Gold Mine in your

Casthouse"; Homogenization Aspects, Continuous versus Batch in an

Integrated Modern Casthouse; Fives Solios Experience in Modern Secondary Aluminium Casthouse Construction; Dry Hearth Melting Furnaces; The Benefits of Forced Circulation for Aluminium Reverberatory Furnaces; Launder System for Aluminium Casting; Melt Quality & Treatment

The Impact of Rising Ni and V Impurity Levels in Smelter Grade Aluminium and Potential Control Strategies Development of a Phosphate - Free Reticulated Foam Filter Material for Aluminium Cast Houses; Results with a Multi Stage System of Filtration Employing a Cyclone; The Use of Electromagnetic Fields for the Detection of Inclusions in Aluminium; Cast House Productivity; Estimating the Production Capabilities of Casthouse Equipment Configuration Options; Direct Chill & Continuous Casting; Downstream Considerations of Fusion Clad Casting

Billet Sump Modification of Al-Billets for the Prevention of Starting CracksNew Billet Mould Casting Technology; Macrosegregation Mechanisms in Direct-Chill Casting of Aluminium Alloys; Organic Coatings to Prevent Molten Metal Explosions; The Supply of Casthouse Equipment and Empowerment of Knowledge to Cast Aerospace Alloys the Almex Way; Grain Refinement and Hot Tearing of Aluminium Alloys - How to Optimise and Minimise; DC Casting Using a TF Combo Bag: 3D Modeling of the Distribution of Molten Metal and Heat Transfer; Ingot Casting; Safety Enhancement in Ingot Casting at Tomago Aluminium

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## Sommario/riassunto

The Aluminium Cast-house Technology Conference in Australia is truly an international event where leaders in the aluminium industries of the five developed continents meet every two years. The participants have the opportunity to listen to acknowledged experts in the field and to learn of the latest developments in aluminium processing technology. It is important, especially during the current worldwide financial crisis, to learn what means are available for reducing costs and to learn how others have adjusted to the present situation. These proceedings contain the technical papers presented a