

عنوان مقاله:

An Overview of Slag Cooling and Granulation Systems, Case Study: Mathematical Modeling of Rotary Disc as a dry method

محل انتشار:

همایش ملی مصرف بهینه آب در صنعت چالشها و راهکارها (سال: 1394)

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خلاصه مقاله:

In this new millennium, Water's ever-growing importance in the industrial manufacturing arena has been demonstrated by an increasing concern regarding the sufficiency of both its quantity and quality for use in industrial applications. Steel slag as the byproduct of steelmaking process would account for 1320% of liquid steel output which use noticeable amount of water for quenching and cooling. Just in Mobarakeh Steel Company at least 378,000 m³ water are used for slag quenching. However, realizing zero dumping of iron and steelmaking slag has been an urgent task to save water resources and energy, to reduce the emission, to protect the environment and to develop a recycling economy in the steel industry. This report outlines the most important ways of slag cooling methods and introduces dry technical solutions by focusing on dry EAF slag cooling which should be implemented by Iran steel factories. Moreover, rotary disc granulation as a dry hot slag processing system has been selected and theoretically developed for a steel making plant with capacity 400, 000 ton annually in Iran

کلمات کلیدی:

Wet cooling, Iron Slag, Dry granulation, Rotary Disc, Air Blowing system

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