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Experimental Study on the Preparation of Pelletizing of the Panzhihua's Fine Ilmenite Concentrate

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Abstract : This paper focuses on the preparation of pelletizing with the Panzhihua ilmenite concentrate to satisfy the requirement of smelting titania slag. The effects of the moisture content, mixing time of raw materials, pressure of pellet, roller rotating speed of roller, drying temperature and time on the pelletizing yield and compressive strength were investigated. The experimental results show that the moister content was controlled at 2.0%~2.5%, mixing time at 20 min, the pressure of the ball forming machine at 13~15 mpa, the pelletizing yield can reach up 85%. When the roller rotating speed is 6~8 r/min while the drying temperature and time respectively is 350 ℃ and 40~60 min, the compressive strength of pelletizing more than 1500 N. The preparation of pelletizing can meet the requirement of smelting titania slag.

Keywords : Panzhihua fine ilmenite concentrate, pelletizing, pelletizing yield, compressive strength, drying
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