

Study on Roll Marks of Stainless Steel in Rolling Mill

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Abstract : In the processing industry of metal forming, rolling is the most used method of processing. In a cold rolling factory of stainless steel, there occurs a product defect on temper rolling process within cold rolling. It is called 'roll marks', which is a phenomenon of undesirable flatness problem. In this research, we performed a series of experimental measurements on the roll marks, and we used optical sensors to measure it and compared the vibration frequency of roll marks with the vibration frequency of key components in the skin pass mill. We found there is less correlation between the above mentioned data. Finally, we took measurement on the motor driver in rolling mill. We found that the undulation frequency of motor could match with the frequency of roll marks, and then we have confirmed that the motor's undulation caused roll marks.

Keywords : roll mark, plane strain, rolling mill, stainless steel

Conference Title : ICMAME 2014 : International Conference on Mechanical, Aeronautical and Manufacturing Engineering

Conference Location : London, United Kingdom

Conference Dates : August 21-22, 2014