Abstract

In the process of inspection and quality control of steel sheets which is considered as an important issue in the metal industry surface defects of metals is one of the reasons that reduces the quality of products, also the detection of different defects in raw metals with the naked eye is very difficult and given that in recent years, automatic surface inspection system has made remarkable progress and is deemed as the research’s mainstream and while the accuracy of visual inspection of people is different there is a need to a rapid, accurate, and non-destructive way to identify and classify surface defects based on the texture and form of this product and guarantee metal quality in the production process; also, increase the production rate and helps separating defective metal from normal metal in a very short period of time. The main purpose of examining surface automatically is to investigate defective parts by comparing the user requirements and the generated images to minimize the wastes led to the product rejection to be delivered steel with better quality to the customer. Accordingly, the expression of different methods and examine them.
References

1. Ke Xu, Shunhua Liu, Yonghao Ai, "Application of Shearlet transform to classification of surface defects for metals" 2015 Elsevier B.V.
3. A. sada siva sarma, R. Janani, A.S.V. Sarma, "Detecting the Surface Defects on Hot Rolled Steel Sheet Using Texture Analysis" 2013(IEEE)
4. Changhang Xu, Jing Xie, Guoming Chen, Weiping Huang, “An infrared thermal image processing framework based on superpixel
5. algorithm to detect cracks on metal surface”, 2014 Elsevier
13. T.Aarthi, M.Karthi, M.Abinesh, “Detection and Analysis of Surface Defects in Metals Using Wavelet Transform” June 2013 1 ISSN
15. Estrella Funes, Yosra Allouche, Gabriel Beltrán, Antonio Jiménez,
Index Terms

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Keywords

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