

计量测试

一种基于CCD的实时测量光栅常数的方法

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摘要

光栅常数是检验光栅质量的重要参数之一.该文介绍了一种实时检测光栅参数的方法,即利用面阵CCD采集光栅衍射图像信息,通过计算衍射 ± 1 级光斑与主极大光斑的能量比得出光栅常数.这种方法具有检测速度快、系统简单、精度高等特点,可用于生产线上光栅的实时检测.

关键词 [光栅常数](#) [面阵CCD](#) [实时检测](#)

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A New Method Based on CCD to Measure the Constant of Grating

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Abstract

The constant of grating is one of the most important parameters to assess the quality of grating. A new method to measure the constant of grating is discussed in the paper. The information of a diffractive image is captured by planar-array CCD. The constant of grating can be got by calculating the power ratio of the main facula to the ± 1 -astafacula. With the advantages of the quick detection, simple structure and high precision, the method can be used in real-time measurement of the quality of gratings in production process.

Key words [constant of grating](#) [planar-array CCD](#) [real-time measurement](#)

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