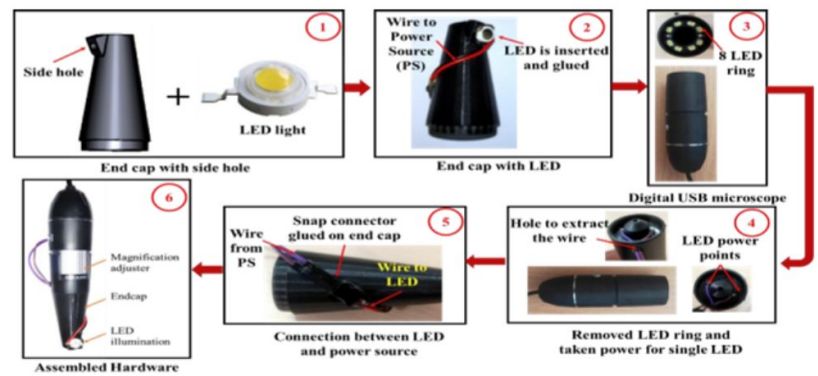


PENDING

(IN202311042626)

Portable device and system for single point strain analysis in sheet metal forming



NEED

Measuring strain in sheet metal is critical for ensuring structural integrity and material performance. Current methods lack precision and efficiency, leading to costly errors in manufacturing processes.

TECHNOLOGY OVERVIEW

This technology enables precise strain measurement in sheet metal by analyzing the deformation of circle or square grids on metal surfaces. Using advanced image processing, it calculates strain based on the deformed shapes of the grids.

TECHNOLOGY KEY FEATURES

The method uses high-resolution image processing and fitting algorithms to calculate strain based on the deformation of grid patterns, ensuring accuracy in manufacturing and quality control.

[Read more here](#)

MARKET ANALYSIS

The global materials testing market is expected to grow at a CAGR of 6.2%, reaching \$16.5B by 2033 (source: MarketsandMarkets). Increasing demand for precise quality control in manufacturing is driving this growth.

Target Industries

1) Materials testing equipment manufacturers, 2) Automotive manufacturers focusing on metal forming and structural integrity, 3) Aerospace companies needing precise material strain analysis.

AT A GLANCE

- SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production), SDG 8 (Decent Work and Economic Growth)

Technology is available for licensing/ co-development.

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