

MATERIAL PROCESSING: FOCUS ON LASER CUTTING

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ABSTRACT

Light Amplification by Stimulated Emission of Radiation (laser) is among the fastest growing technologies in the engineering world and has a vast range of applications. It involves focusing photons of lights on a single spot of a workpiece with considerable accuracy, so as to transfer energy into the workpiece in a measure that is adequate to melt or achieve a particular material process. The technology is extremely broad, hence this review will focus on using laser for cutting applications which is one of the most popular, recently developed and emerging laser material processing techniques. This review utilizes relevant and recent literature to discuss material cutting by laser, the attributes of laser cutting, laser cutting parameters optimization as well as the trends in development of the process.

KEYWORDS: Laser, Material processing, cutting, Gas Assist Lasers & Waterjet Guided Lasers