

Modelling And Optimisation Of Laser Assisted Oxygen Lasox Cutting

Laser assisted oxygen Lasox cutting is a thermal cutting process that uses a laser to melt and oxidize the material being cut. The process is typically used to cut thick metals, such as steel and aluminum.



Modelling and Optimisation of Laser Assisted Oxygen (LASOX) Cutting: A Soft Computing Based Approach (SpringerBriefs in Applied Sciences and Technology)

by Mark Edward Soper

★★★★☆ 4.2 out of 5

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Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 86 pages



The advantages of laser assisted oxygen Lasox cutting include:

* High precision * Fast cutting speeds * Excellent edge quality * Narrow kerf width * Minimal heat-affected zone

The disadvantages of laser assisted oxygen Lasox cutting include:

* High cost * Complex process * Requires specialized equipment

Principles of Laser Assisted Oxygen Lasox Cutting

Laser assisted oxygen Lasox cutting is a two-step process. In the first step, the laser beam is used to melt the material being cut. In the second step, oxygen is introduced into the cut zone, which oxidizes the molten metal and creates a kerf.

The process parameters that affect the quality of the cut include:

* Laser power * Laser wavelength * Laser beam diameter * Cutting speed *
Oxygen flow rate * Nozzle diameter

The optimization of these process parameters is critical to achieving high-quality cuts.

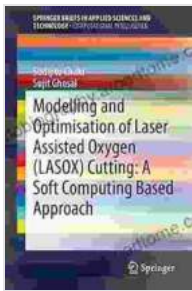
Applications of Laser Assisted Oxygen Lasox Cutting

Laser assisted oxygen Lasox cutting is used in a wide variety of applications, including:

* Automotive manufacturing * Aerospace manufacturing * Shipbuilding *
Construction * Medical device manufacturing * Jewelry making

The process is particularly well-suited for cutting thick metals, such as steel and aluminum.

Laser assisted oxygen Lasox cutting is a versatile and powerful cutting process that can be used to create high-quality cuts in a wide variety of materials. The process is complex and requires specialized equipment, but it can be optimized to achieve excellent results.

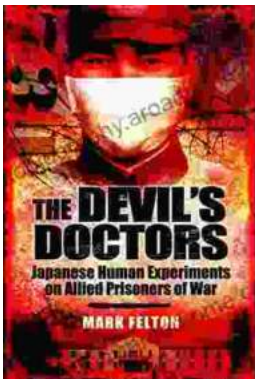


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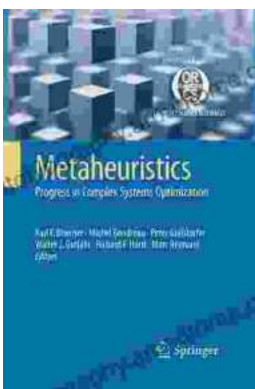
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