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Sugiura

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(54) **LASER PROCESSING METHOD**
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See application file for complete search history.

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(58) **Field of Classification Search**
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(57) **ABSTRACT**
To provide a laser processing method which is capable of
enhancing the dividing performance according to a required
quality. By irradiating an object to be processed with a laser
light L having a pulse waveform in which its half width and its
bottom width are equal to one another, a plurality of modified
spots are formed along a line to cut inside the object, and a
modified region is formed with the plurality of modified
spots. Here, a laser light source **101** controls a drive power
source **51** by a laser light source controller **102**, to switch
among a pulse waveform among first to third pulse wave-
forms according to a PE value of the laser light L. In the case
of a low PE value, a first pulse waveform formed such that a
peak value is located on its first half side and into a saw-blade
shape is set as the pulse waveform, and in the case of a high PE
value, a second pulse waveform formed such that a peak value
is located on its latter half side and into a saw-blade shape is
set as the pulse waveform.

16 Claims, 20 Drawing Sheets

