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(54) Title: APPARATUS AND METHOD FOR WRITING A PATTERN IN A SUBSTRATE

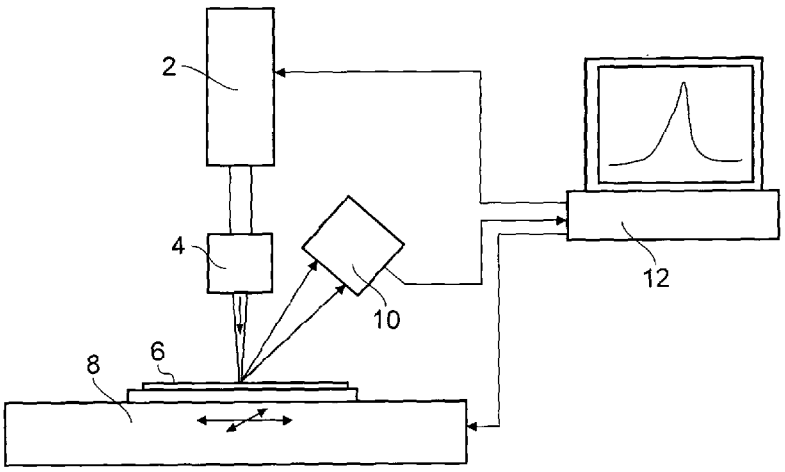


FIG. 1

(57) Abstract: A method and apparatus are described for forming a pattern comprising one or more markings on a substrate (6). The method comprises the step of forming each marking by locally heating the substrate (6), for example using a fibre laser (2). A step is also performed of monitoring the temperature of the substrate, e.g. using a temperature sensor (10), whilst each marking is being formed. The method may be used to form a magnetic encoder scale on a stainless steel substrate having a high content of martensitic material. The local heating causes the martensitic material to be transformed into austenitic material. An encoder scale made using the method is also described.

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