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Laser Duration of Surface Textures of Slab Design

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Abstract: The laser has a precise directional motion on products. This is used to develop a surface texture on a slab geometry. This is used in most products for different requirements. This can include designs such as stability, tensile, compressive and flexural resistances of slabs. These contain various products. This can require a replacement or reusability without developing more products. The surface textures can be developed on a product at different positions and dimensions. This engages with the surface without the corrosion of the product. To ensure a much higher uses for suppliers and producers. These slabs can be linear or nonlinear. This depends on the contacting surfaces of the products. The surface texture prevents the materials degradation for certain uses. The material content is unchanged when to be used. The laser is a high precision method to develop surface textures of various dimensions. This laser is in the direction of the geometry design. To produce a change of the surface. The laser beam density was varied at the the product. This produced a change in the tensile, compressive and rotational properties of the geometry.

Keywords: Laser Duration, Slabs, Materials

1. Introduction

There are many existing production that use various processes. This can change the properties, dimensions and shape of the product for its use. In the process, the laser is used at a much higher beam densities. This converges usually to 0.2 mm diameter on the slab design. This moves in a direction horizontally and vertically on the slab [1].

The surface texture heights and widths can vary in property and dimensions. When the process has been performed the product is set to stability of its properties. This requires much less processes to improve the accuracy. This is because the laser uses coordinates for its motion. This is used to precisely surface texture that is the same as it's concept [2].

The slabs can be obtained of varying dimensions and properties from suppliers. This can be used to produce high quantities of products with precision of the laser [3].

This can be used for load capacity. These are used for products when there is high contaminants on the surface. This can affect its use. This can be used to replace a product. That has been degraded for slabs [4].

The initial designs are known as tapered and rectangular geometries. The products are not linear when there are loads. These are such as tensile, compressive and rotational loads. The rectangular product is linear in design. This is used for load support in tensile, compressive and corrosion resistance. These tapers can be between 30 and 45 degrees on the surface [5].

This is recommended that the higher angle is used for surface textures that are greater in dimensions. To suggest lower angles for decrease of surface textures. This is to facilitate the setup of these slabs. When these have been designed [6].

The surface textures are in a path. This is produced by laser in contact with the product. Lasers can be used to produce surface texture at various spacing of products [7].

The importance of slab with a tapered design is lower resistance. This ensures that this when together in the product. These are placed without much prevention. This is the resultant of tensile and compressive loads is much less and is rotational in direction. These are mostly distributed loads of rectangular slabs [8].

The rectangular slabs are more efficient to set up in design. These although have low corrosion resistance. Therefore can degrade much than tapered slabs [9].

Surface textures are placed in an even and distributed path of the laser. These ensure that the contact between the products. This is produced to have an increase in load

capacity [10].

The surface texture has a height and width equal to waveform of laser. This laser has an increase in the beam density on the surface. This produces a change in the spacing of the particles. This should occur without the conversion of particles to gaseous substances. These materials have different properties. This is when the beam is used on the surface of the product [11].

The surface is produced on a portion of the product. This is capable of ensuring contact between the slab design [12].

1.1. Laser Production

This process is versatile and capable of producing the precise surface textures. These can have a greater load capacity than methods used in slab design [13].

The setup can be used for great amount of these slab design. This can be required for slabs that have a higher dimensions but low quantity. The laser is used to process on a conveyor. These products are moved linear direction towards the laser. This can be a sequence of processes of the slabs. The design of surface textures is setup in the laser. The process then produces the slab design.

Geometry are used for load capacity products. These are designed for loads that can be motion in the tensile, compressive and rotational directions. This should design to ensure that the geometry has high performance when in use. The laser is a process that is precise in design. This can produce a change of the particle dimensions. The beam has a density processes the surface. This has laser diameter used to produce the geometry. When the laser is in motion the slab is placed in the direction of the product. The beam density can be changed by varying the laser shape [14]. This can produce surface textures angles of less than 3.14 angle. To do this the aperture is changed using rectangular and angular shapes.

1.2. Beam Density

Laser is a high efficient and low emission process. The products are precise in dimension and capacity. This is ensures that there is contact of the geometry. The beam density can be varied using the settings. To change this the shape of the waveform is varied. These are various beam shapes used with the laser. This suggests has a change in densities. The surface textures then have the shape of the waveform. This is performed by changing the aperture of the laser. These produces the beam shape from rectangular to angular process. The lasers that use gaseous substances enhance the beam density. This improves the efficiency of the product. This prevents contaminants that degrade the geometry. The surface textures condenses when is processed for a time of 3 to 4 minutes of the product [15].

2. Method

The laser most used has a beam diameter of 0.2mm with the product. This process required motion of the laser and the slab. This produced the product when processed. The slab had surface texture without the entire material. The laser duration was set on the product of 0.03, 0.04, 0.05s. This was chosen to be equal to the time for frequency of the waveform that is 0.1 time.

The laser used for the process had various dimensions of beam shape. These are rectangular and angular for the geometry design. This was processed with high efficiency and at a particular duration equal to the frequency of the laser waveform. To ensure the beam density can be varied in the process. The laser was used to develop surface textures of various shapes. These can have contact angles of the geometry from 3.14÷4 to 3.14÷2 on the product used.

The laser beam density can be derived using the beam diameter and intensity of the laser on the slab.

$$\text{Beam density}_{\text{angular}}=2I\div D. \quad (1)$$

$$\text{Beam density}_{\text{rectangular}}=2.12I\div D. \quad (2)$$

The coefficient of the equation is used to indicate the beam shape. The density with 2 is an angular waveform. The laser with coefficient of 2.12 is a rectangular shape.

The slabs are used of similar dimensions of process. To produce these surface textures for products. These indicate the changes of the beam density used.

The slab was then produced with a distributed surface texture. These are designed to have equal distances of the slab. The rectangular product was used to develop the surface textures for each of these durations.

The laser setup then processes the product. The slab is then changed with designs of similar dimensions. The surface textures are obtained from the used process.

3. Results and Discussion

The laser produced a change to each of these designs of slabs. This had surface textures of various dimensions. The slabs had a change of the properties. These include tensile, compressive and rotational loads. This can resist displacement by various amounts of the slab.

The laser duration of 0.03s had the slab lowest beam density. The particles when displaced by a low amount on the product. The laser had the load capacity in the highest tensile and lowest compressive directions. The laser duration of 0.04s produced a much increase in particle distance. This had a higher beam density. The product had a lower tensile and compressive loads but the highest rotational direction.

The laser duration of 0.05s produced an increase in distance of particles on the slab. This had the greatest beam density on the product. The slab that resulted had the lowest tensile and compressive loads. This produced slabs of various capacities and properties. The surface textures had various particle dimensions processed. These include rectangular and angular products. The beam density resulted in various tensile, compressive and rotational capacities. The beam density that was rectangular in shape

had a much greater distance between the particles. The laser using angular diameter produced a lower distance between the product. The laser processed using a beam that was angular shape. This produced lesser concentration of the beam on the geometry. This had the lowest displacement between the particles.

These beam shapes produced various tensile, compressive and rotational load capacity. The laser that had a rectangular diameter resulted in high tensile and compressive loads. This beam had the lowest rotational capacity in use. The laser with an angular diameter produced a lower tensile and compressive loads. This beam had the highest rotational load. This ensures motion in various directions.

4. Conclusion

The laser had benefits to methods used for slabs. These include accuracy and precision of the capacity and properties of the product. When the laser duration was increased the particle distance was greater of surface textures on the slab. The results indicated the rotational load had the highest capacity that vary much in use. This can be used for slabs that are tapered in design. The laser duration that had the highest tensile and compressive loads. This can be used for slabs of various dimensions.

The laser produced the precise surface textures on the products. These properties had much variation when using the the methods of development of the beam of the geometry. This laser that had a rectangular shape is used for product that change in the linear direction. The beam density with an angular shape is used for products that motion in various direction. These would be used for geometry designs. The laser process that is used for products that are rectangular have the same beam dimensions. The products having the the tapered design should use an angular beam to process.

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