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**Hackel**

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(54) **ABLATION LAYERS TO PREVENT PITTING IN LASER PEENING**

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(51) **Int. Cl.**

| | |
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| ***B23K 26/18*** | (2006.01) |
| ***C21D 10/00*** | (2006.01) |

(52) **U.S. Cl.**

CPC ..... ***B23K 26/0006*** (2013.01); ***B23K 26/0081*** (2013.01); ***B23K 26/18*** (2013.01); ***C21D 10/005*** (2013.01); *B23K 2201/18* (2013.01); *B23K 2201/34* (2013.01); *B23K 2203/08* (2013.01); *B23K 2203/16* (2013.01); *B23K 2203/50* (2015.10)

(58) **Field of Classification Search**

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USPC ..... 219/121.6–121.86, 128

See application file for complete search history.

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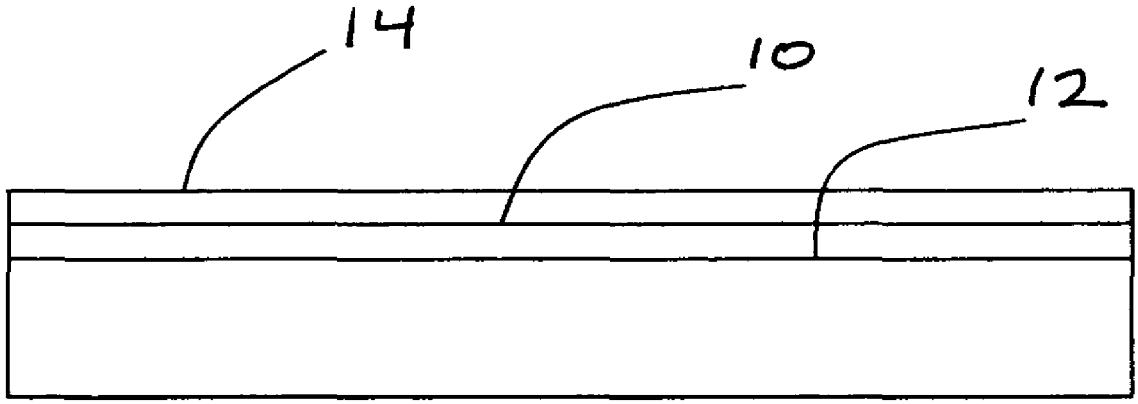
(57) **ABSTRACT**

A hybrid ablation layer that comprises a separate under layer is applied to a material to prevent pitting resulting from laser peening. The underlayer adheres to the surface of the workpiece to be peened and does not have bubbles and voids that exceed an acceptable size. One or more overlayers are placed over and in contact with the underlayer. Any bubbles formed under the over layers are insulated from the surface to be peened. The process significantly reduces the incidence of pits on peened surfaces.

**22 Claims, 1 Drawing Sheet**