

CARBURIZATION OF STEEL ALLOYS BY ATMOSPHERIC MICROWAVE PLASMA

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Conventional carburization techniques are not very energy efficient, because much of the heat generated is not utilized. We present a simple technique that uses microwave plasma at atmospheric pressure for carburization of steel alloys. This technique is energy efficient and can also be used to carburize only selected areas of the part. Carburization results are presented for steel alloy 8620H and the effects of applying a pulsed DC bias in carburization process are also discussed.