

Title (en)  
METHOD AND SYSTEM FOR LOCALLY REGULATING AND CONTROLLING METAL MEMBER RESIDUAL STRESS

Title (de)  
VERFAHREN UND SYSTEM ZUR LOKALEN REGELUNG UND STEUERUNG DER RESTSPANNUNG EINES METALLELEMENTS

Title (fr)  
PROCÉDÉ ET SYSTÈME PERMETTANT DE RÉGULER ET DE CONTRÔLER LOCALEMENT UNE CONTRAINTE RÉSIDUELLE D'ÉLÉMENT MÉTALLIQUE

Publication  
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Application  
**EP 13871844 A 20130311**

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Abstract (en)  
A method and system for locally regulating and controlling a metal member residual stress, the method comprising: arranging one or more high-energy ultrasonic wave transducers (1) in or around a metal member area that the residual stress needs to be regulated and controlled, fixing the ultrasonic wave transducers (1) and controlling the ultrasonic wave transducers to emit high-energy ultrasonic waves, regulating and controlling the magnitude and direction of the residual stress value in the area by adjusting the parameters such as frequency, amplitude, phase and energy. The method and system effectively eliminate, inhibit and reestablish in situ local metal member residual stress, and have simple structure, easy operation, high efficiency, low cost, and reduced pollution.

IPC 8 full level  
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CPC (source: EP)  
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