Title (en)

Method for processing an injection nozzle

Title (de)

Verfahren zum Bearbeiten einer Einspritzdüse

Title (fr)

Procédé de traitement d'une buse d'injection

Publication

EP 2320064 A1 20110511 (DE)

Application

EP 10174323 A 20100827

Priority

DE 102009046437 A 20091105

Abstract (en)

The method for operating an injector for marine diesel engine operated with heavy oil, comprises filling recess of the injector serving fuel conduits with a rheopectic fluid or a dilatant fluid and then subjecting with autofrettage pressure so that interior pressure constructs itself in the recess of the injector to increase the duration strength of the injector. The autofrettage pressure is measured in such a way that the injector is plastically deformed in section wise manner in the area of the recess that serves the fuel conduits. The method for operating an injector for marine diesel engine operated with heavy oil, comprises filling recess of the injector serving fuel conduits with a rheopectic fluid or a dilatant fluid and then subjecting with autofrettage pressure so that interior pressure constructs itself in the recess of the injector to increase the duration strength of the injector. The autofrettage pressure is measured in such a way that the injector is plastically deformed in section wise manner in the area of the recess that serves the fuel conduits, and compressive residual stresses remain in the plastically deformed section after the reduction of the autofrettage pressure. The rheopectic fluid or dilatant fluid is additionally used for increasing the duration stability of the injector and also for hydro-erosive filleting of injection holes (5) of the injector in such a way that the fluid is pumped with slight pressure by injection nozzle (1) and the pressure is increased for the flow of the fluid up to the autofrettage pressure after the erosive processing of the injection holes.

Abstract (de)

Die Erfindung betrifft ein Verfahren zum Bearbeiten einer Einspritzdüse, wobei der Kraftstofffüng dienende Ausnehrnungen der Einspritzdüse mit einem rheopexischen Fluid oder einem dilatanten Fluid gefüllt werden, und wobei das Fluid mit einem Autofrettagedruck beaufschlagt wird, sodass sich in den Ausnehmungen der Einspritzdüse ein derartiger Innendruck aufbaut, dass die Dauerschweilfestigkeit der Einspritzdüse erhöht wird.

IPC 8 full level

C21D 7/06 (2006.01); **F02M 61/16** (2006.01)

CPC (source: EP)

C21D 7/06 (2013.01); **C21D 7/12** (2013.01); **F02M 61/168** (2013.01); F02M 2200/8053 (2013.01); F02M 2200/9061 (2013.01)

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BA ME RS

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DOCDB simple family (application)

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