(12)

CORRECTED EUROPEAN PATENT APPLICATION

(15) Correction information:

Corrected version no 1 (W1 A2)

Corrections, see

INID code(s) 71 **Bibliography**

(48) Corrigendum issued on:

14.04.2010 Bulletin 2010/15

(43) Date of publication:

20.01.2010 Bulletin 2010/03

(21) Application number: 09008133.2

(22) Date of filing: 22.06.2009

(84) Designated Contracting States:

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK TR

Designated Extension States:

AL BA RS

(30) Priority: 24.06.2008 JP 2008164008

(71) Applicants:

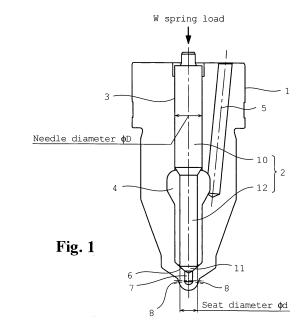
• NICO Precision Co., Inc. Minamiuonuma-city Niigata (JP)

· Niigata Power Systems Co., Ltd. Tokyo (JP)

(51) Int Cl.:

F02M 61/16 (2006.01)

- (72) Inventors:
 - Kuwahara, Takaaki Minamiuonuma-city Niigata (JP)
 - Shimogishi, Takayuki Kitakanbara-gun Niigata (JP)
- (74) Representative: Klingseisen, Franz Klingseisen & Partner Postfach 10 15 61 80089 München (DE)
- (54)Fuel injection device for diesel engine, method for manufacturing the same, and valve unit
- (57)Wear and spalling are to be prevented at seat portions of a fuel injection device for a diesel engine. In a fuel injection device for a diesel engine wherein a needle valve is moved in the inside of a nozzle body to which fuel is supplied, to open or close seat faces through which the nozzle body and the needle valve come into contact with each other, thereby controlling injection of fuel from nozzle holes opening to the nozzle body, the portion serving as the seat portion of the nozzle body and the portion serving as the seat portion of the needle valve are formed of a nitrided alloy steel, and a compound layer and a first layer in a diffusion layer are removed from a surface of each of the seat portions. Since a second layer having high toughness serves as a seat face, both wear resistance and fatigue resistance are improved and particularly it is possible to prevent spalling of the seat portion of the nozzle body.



EP 2 146 087 A8