

Title (en)  
LOAD-INDICATING FASTENER

Title (de)  
BEFESTIGUNGSELEMENT MIT BELASTUNGSANZEIGE

Title (fr)  
ELEMENT DE FIXATION INDIQUANT UNE CHARGE

Publication  
**EP 1509703 A1 20050302 (EN)**

Application  
**EP 02767622 A 20020903**

Priority  
• GB 0204040 W 20020903  
• GB 0121317 A 20010903

Abstract (en)  
[origin: WO03021115A1] A load-indicating fastener makes use of a probe attachment which is locatable within a bore hole (20) made in the fastener. The attachment includes a sensor (52) with sensing surface (58) located at one end and can be secured to the fastener at or near its opposite end. When secured, an air gap (28) is left between the sensing surface (58) and an internal surface (22) of the bore hole. This arrangement of surfaces (22, 58) with air gap (28) effectively defines a capacitor which is sealed within the fastener. When the fastener is loaded, an elastic displacement occurs between the two surfaces (22, 58), which changes the capacitance of the capacitor. Electric cabling (34) is provided for supply and extraction of signals that enable measurement of a parameter indicative of capacitive reactance across this capacitor. This measurement provides an indication of strain experienced by the fastener.

IPC 1-7  
**F16B 31/02**

IPC 8 full level  
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CPC (source: EP)  
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Citation (search report)  
See references of WO 03021115A1

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