

Title (en)

PULSED BACKSCATTER IMAGING APPARATUS AND METHOD

Title (de)

VORRICHTUNG UND VERFAHREN ZUR BILDGEBUNG MIT GEPULSTER RÜCKSTREUUNG

Title (fr)

APPAREIL ET PROCÉDÉ D'IMAGERIE DE RÉTRODIFFUSION PULSÉE

Publication

**EP 3224655 A1 20171004 (EN)**

Application

**EP 15800886 A 20151120**

Priority

- GB 201420834 A 20141124
- GB 2015000303 W 20151120

Abstract (en)

[origin: WO2016083766A1] A backscatter imaging apparatus (10), comprises a laser plasma (wakefield) accelerator (2) directing a short pulsed, collimated beam of electrons (3) towards a barrier (4) and a concealed object (5). A fast detector (6) receives a backscattered X-ray signal (7) and generates an electronic signal representative of the intensity of X-rays backscattered by each scattering event. Signal processor (8) analyses the signal intensity and time domain data to determine the range of the scattering event from the apparatus. The imaging device (9) displays an output image of the spatially resolved density profile of the object (5) concealed behind a barrier (4). The use of a laser wakefield generated electron beam allows X-ray backscatter imaging across an increased stand-off range or greater penetrative depth.

IPC 8 full level

**G01V 5/00** (2006.01)

CPC (source: EP GB)

**G01V 5/222** (2024.01 - EP GB)

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2016083766 A1 20160602**; EP 3224655 A1 20171004; GB 201420834 D0 20150107; GB 201520442 D0 20160106; GB 2534276 A 20160720; GB 2534276 B 20170823

DOCDB simple family (application)

**GB 2015000303 W 20151120**; EP 15800886 A 20151120; GB 201420834 A 20141124; GB 201520442 A 20151120