

Title (en)

X-RAY DETECTOR FOR A LOW DOSAGE SCANNING BEAM DIGITAL X-RAY IMAGING SYSTEM

Title (de)

ROENTGENSTRAHLUNGSDETEKTOR FUER EINEN DIGITALEN, NIEDERDOSEN-RASTER-ROENTGENBILDWANDLER

Title (fr)

DETECTEUR DE RAYONS X DESTINE A UN SYSTEME D'IMAGERIE NUMERIQUE A RAYONS X A FAISCEAUX D'EXPLORATION
ENTRAINANT UNE FAIBLE DOSE D'IRRADIATION

Publication

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Application

EP 94927433 A 19940405

Priority

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Abstract (en)

[origin: WO9423458A2] A scanning beam digital x-ray imaging system according to the present invention includes an x-ray tube (10) having an electron beam source (161) and a target anode (50). Circuitry is provided for focussing the beam (164) and scanning the beam (20, 30) across the target anode (50) in a predetermined pattern such as a serpentine scan pattern. A collimating element (90), preferably in the form of a perforated grid containing an array of apertures (140), is interposed between the x-ray source (50) and an object to be x-rayed (80). The apertures (140) are oriented to form x-ray beams (100) converging at a detector array (110) on a plane (270) located a selected distance from the collimating element (90). That distance is selected to allow placing the object to be x-rayed (80) in between the collimating element (90) and the detector array (110). A segmented x-ray detector array (110) containing a rectangular matrix of detector elements (170) is located in the detection plane (270). A focal plane (280) is created which gives optimal resolution at a particular, selectable distance from the x-ray source (50).

IPC 1-7

H01L 31/115

IPC 8 full level

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