

Title (en)

Apparatus and method for increasing X-ray tube power per target thermal load

Title (de)

Vorrichtung und Verfahren zur Leistungssteigerung einer Röntgenröhre durch thermische Targetbelastung

Title (fr)

Appareil et procédé pour augmenter la puissance d'un tube à rayons X par charge thermique de la cible

Publication

EP 1146542 A1 20011017 (EN)

Application

EP 01300568 A 20010123

Priority

US 54724200 A 20000411

Abstract (en)

An X-ray tube assembly (10) includes an anode (14), a cathode (12), and an X-ray transparent window (16). The anode (14) includes an X-ray-producing target (18) having a surface (20). The cathode (14) has an electron-beam axis (22) which intersects the target surface (20) at a focal point (24) and which is oriented at a first angle, (26) with respect to the target surface (20), of between and including fifteen and sixty degrees. The window (16) includes a surface (28) having a center point (30). A line between the focal and center points makes a second angle, with respect to the target surface (20), which is less than the first angle. A method for producing X-rays employs these angles. <IMAGE>

IPC 1-7

H01J 35/14

IPC 8 full level

H05G 1/00 (2006.01); **H01J 35/00** (2006.01); **H01J 35/14** (2006.01)

CPC (source: EP US)

H01J 35/00 (2013.01 - EP); **H01J 35/147** (2019.04 - EP US)

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