

Title (en)

Rotating anode X-ray tube with a liquid lubricant.

Title (de)

Drehanoden-Röntgenröhre mit flüssigem Schmiermittel.

Title (fr)

Tube à rayons X à anode tournante à lubrifiant liquide.

Publication

**EP 0373705 B1 19940615 (DE)**

Application

**EP 89203122 A 19891208**

Priority

DE 3842034 A 19881214

Abstract (en)

[origin: JPH02244545A] PURPOSE: To prevent the operation of an X-ray tube from being degraded by precipitation of lubricant to be leaked from a bearing by containing a substance forming a mixture phase or an alloy as the result of lubricant leakage on a face in an opening region via a part at which a bearing comes into contact with the remaining vacuum region. CONSTITUTION: A face in an opening region where a lubricant leaked from a bearing enters the remaining vacuum region of an X-ray tube is gold-plated. Gold-plating is performed for an exterior face of a support element 9, an opposite face of a bush 10, and an interior face of a rotor 11. A gallium alloy forming a lubricant wets a gold-plated metal face, and therefore a new alloy is formed at the room temperature. Lubricant precipitation is adhered to these metal faces in a region free of an electric field and never leaked in a vacuum region of the X-ray tube met by the electric field. Thus, a face in an opening region is easily wetted by lubricant and finished so as to form the latter and alloy. Gold or the other precise metal are employed as a metal against gallium as lubricant.

IPC 1-7

**H01J 35/10**

IPC 8 full level

**H01J 35/10** (2006.01)

CPC (source: EP US)

**H01J 35/104** (2019.04 - EP US); **H01J 2235/106** (2013.01 - EP US); **H01J 2235/1066** (2013.01 - EP US)

Cited by

EP0479197A1; EP0479194A1; EP0477868A1; US5169243A; DE19510068A1; US5654999A; EP0479198A1; US5210781A; DE19606871A1; DE19606871C2; DE19510067A1

Designated contracting state (EPC)

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