

Title (en)

PLURAL-STAGE VACUUM X-RAY IMAGE AMPLIFIER

Publication

EP 0033894 B1 19840530 (DE)

Application

EP 81100574 A 19810127

Priority

DE 3004351 A 19800206

Abstract (en)

[origin: US4362933A] In an exemplary embodiment wherein the x-ray image, converted into an electron image, is intensified through acceleration in the electrical field, in at least two stages which are inter-coupled via an intermediate screen, such screen contains, as significant elements, a cathodoluminescent layer and a photocathode layer which is optically in contact with the latter. Of these, the one is disposed on the one side and the other is disposed on the opposite side of a satisfactorily stable carrier plate which allows the light of the cathodoluminescent layer to pass through. In the case of this intermediate screen it is difficult to keep the surface sufficiently clean for the purpose of applying the photocathode layer. To this end, the disclosure provides that the surface of the carrier plate be coated with a coating which is resistant to the photocathode layer, which coating, for a photocathode layer of cesium antimony, can be comprised of cesium iodide and be 5 and 10 μm thick. Thus a tight (or sealed) covering of the base and a clean surface are obtained. An x-ray image intensifier improved in accordance with the disclosure is particularly suited for use in medical x-ray diagnostics.

IPC 1-7

H01J 31/50; **H01J 29/38**

IPC 8 full level

H01J 29/38 (2006.01); **H01J 31/50** (2006.01)

CPC (source: EP US)

H01J 31/508 (2013.01 - EP US)

Citation (examination)

- GB 2016206 A 19790919 - DIAGNOSTIC INFORM
- FR 2161064 A1 19730706 - ELECTRON PHYSICS LTD
- FR 2284185 A1 19760402 - SIEMENS AG [DE]
- DE 2624781 A1 19761209 - RCA CORP
- US 2555423 A 19510605 - EMANUEL SHELDON EDWARD

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

EP 0033894 A1 19810819; **EP 0033894 B1 19840530**; DE 3004351 A1 19810813; DE 3163788 D1 19840705; JP S56123655 A 19810928; JP S5843859 B2 19830929; US 4362933 A 19821207

DOCDB simple family (application)

EP 81100574 A 19810127; DE 3004351 A 19800206; DE 3163788 T 19810127; JP 1674881 A 19810206; US 22747281 A 19810122