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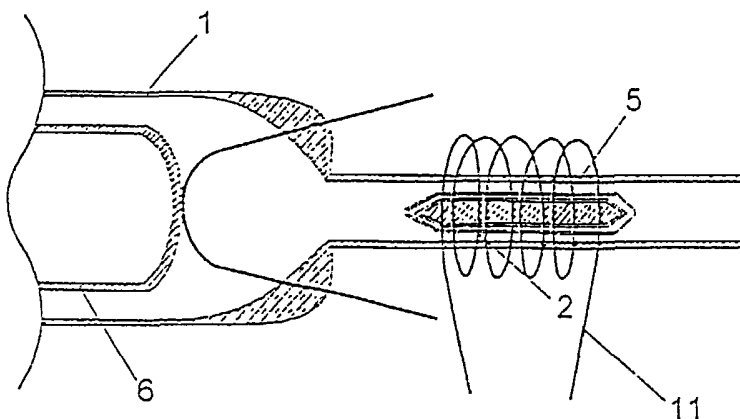
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(54) Title: INTRODUCING MERCURY INTO A DISCHARGE LAMP



(57) Abstract: The invention relates to methods of manufacturing gas-discharge electron lamps, and neon tubes in particular. According to the invention, it is proposed, prior to carrying out vacuum treatment of the internal space of an electron lamp (1), to mount at least one glass capsule (2) combined in an open metal combiner (4) in an exhaust tube (5), in close proximity to an exposed electrode in such manner that the opening provided in metal container (4) is facing the working area of the lamp (1). Upon carrying out vacuum treatment and filling the internal space with an inert gas, the portion of exhaust tube (5) that contains

capsule (2) disposed within metal container (4) is separated from evacuation unit (10), and this area is subjected to the local effect of a high-power electromagnetic radiation, thereby causing substantially instantaneous heating of metal container (4), which results in a rupture of glass capsule (2) and intense evaporation of the liquid mercury (3) combined therein, thereby resulting in a directional flow of pure mercury vapour, which flow rapidly fills up said internal space of the tube through the opening provided in metal container (4). Such method permits to provide environmentally safe production and to eliminate contamination of mercury inside the working space of a lamp, which in turn allows carrying out precise dosing and introduction of calculated minimal amounts of mercury. In addition, the inventive method does not require application of special electrodes and might be used in any mass manufacture of commercial products, and neon tubes in particular.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01J9/395

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 499 197 A (POSEY WILLIAM T) 28 February 1950 (1950-02-28) column 2, line 2 - line 26; figures ---	1,5
A	US 4 335 326 A (LATASSA FRANK M ET AL) 15 June 1982 (1982-06-15) cited in the application abstract; figures column 2, line 15 - line 20 ---	1,5
A	DATABASE WPI Section Ch, Week 197544 Derwent Publications Ltd., London, GB; Class L03, AN 1975-73414W XP002278505 & JP 50 030945 B (HITACHI LTD), 6 October 1975 (1975-10-06) abstract --- -/--	1,5

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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- *A* document defining the general state of the art which is not considered to be of particular relevance
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- *Z* document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 003, no. 140 (M-081), 20 November 1979 (1979-11-20) -& JP 54 118674 A (TOSHIBA CORP), 14 September 1979 (1979-09-14) abstract; figure -----	1,5

INTERNATIONAL SEARCH REPORT

Information on patent family members

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US 4335326	A	15-06-1982	JP 56158056 U	25-11-1981
JP 50030945	B	06-10-1975	NONE	
JP 54118674	A	14-09-1979	NONE	