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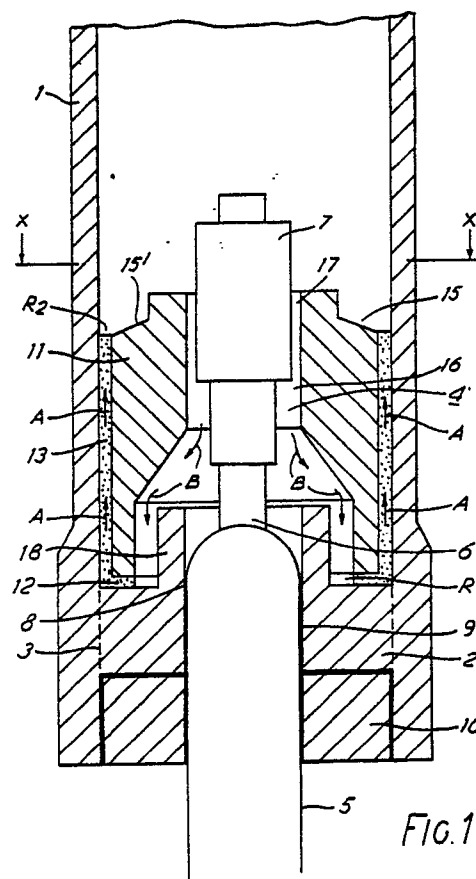
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(71) Applicant: **THORN EMI plc**(54) **Discharge arc lamp.**

(57) A discharge arc lamp includes an arc tube (1) containing a dose, an electrode structure (4) sealed to each end of the arc tube, and an insert member (11; 23, 24) positioned between the arc tube wall and at least one said electrode structure (4). The insert member (11; 23, 24) is arranged to define a wick (12, 13, 15; 22, 22'; 25, 25') which is effective, in operation of the lamp, to move liquid dose, by capillary action, from a relatively cold region (R₁) of the arc tube (1) adjacent to said end into a reservoir (R₂) in a relatively hot region of the arc tube (1), and to further define a passageway (16) allowing movement of dose, by vapour diffusion, to said relatively cold region (R₁). The wick (12, 13, 15; 22, 22'; 25, 25') is so configured as to accommodate a variable volume of liquid dose. The passageway is configured to enable attainment of a desired operating pressure in the arc tube (1). The distributions of vapour pressure and temperature along the passageway encourage condensation of vapour at said relatively cold region (R₁) such that the wick (12, 13, 15; 22, 22'; 25, 25') can maintain a substantially continuous supply of liquid dose at the reservoir (R₂). Such a discharge arc lamp has an effective cool spot temperature, at the exposed surface of liquid in the reservoir (R₂) supplied by the wick (12, 13, 15; 22, 22'; 25, 25'), which is higher than the temperature at the ends of the arc tube (1).

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EUROPEAN SEARCH REPORT

Application Number

EP 88 31 0343

DOCUMENTS CONSIDERED TO BE RELEVANT					
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)		
A	EP-A-0 080 820 (TORN EMI) * pages 4 - 5, paragraph 1-3 * paragraph 1; figures 1, 9 * - - -	1,7,11,12	H 01 J 61/24 H 01 J 61/82		
A	EP-A-0 188 229 (GENERAL ELECTRIC) * abstract; claim 5; figure 2 * - - -	1,11,12, 13			
A	GB-A-5 264 01 (SIEMENS) * page 4, left-hand column, lines 7 - 56; figure * - - -	1,13			
A	EP-A-0 110 249 (GENERAL ELECTRTIC) * page 4, last paragraph - page 5; figure * - - - - -	1,2			
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.5) H 01 J 61/00		
Place of search The Hague		Date of completion of search 29 November 90	Examiner HULNE S.L.		
<table><tr><td>CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention</td><td>E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons ----- &: member of the same patent family, corresponding document</td></tr></table>				CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention	E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons ----- &: member of the same patent family, corresponding document
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