

Title (en)

Slim tube funnel design with improved funnel

Title (de)

Design eines Trichters einer dünnen Röhre mit verbessertem Trichter

Title (fr)

Conception d'entonnoir de tube mince avec entonnoir amélioré

Publication

**EP 1162644 A3 20031105 (EN)**

Application

**EP 01113334 A 20010601**

Priority

US 58710200 A 20000602

Abstract (en)

[origin: EP1162644A2] A cathode ray tube has a glass envelope including a faceplate panel; a neck end; and a funnel connected between the panel and the neck end. The funnel has a main body portion and a yoke region, with the main body portion including at least one reinforcement rib. The reinforcement rib includes a curved ridge bend in the funnel that is curved outward away from a vacuum side of said funnel. Alternatively, the reinforcement rib includes a curved mound-like increase in thickness of the funnel. The curved thickness can be directionally oriented inwardly towards the vacuum side, outwardly away from the vacuum side, or both. The reinforcement rib can extend along the funnel in a direction from the neck end towards the faceplate panel, along the funnel in a direction transverse to that from the panel to the neck end, or a combination of both.  
<IMAGE>

IPC 1-7

**H01J 29/86; H01J 29/87**

IPC 8 full level

**H01J 29/86** (2006.01); **H01J 29/87** (2006.01)

CPC (source: EP)

**H01J 29/861** (2013.01); **H01J 29/87** (2013.01); **H01J 2229/8606** (2013.01)

Citation (search report)

- [XY] FR 867824 A 19411129 - TELEFUNKEN GMBH
- [XY] US 2969162 A 19610124 - STUTSKE WILLIAM A
- [Y] US 2825129 A 19580304 - HEMPEL GUSTAV A
- [Y] GB 786640 A 19571120 - PHILIPS ELECTRICAL IND LTD
- [Y] US 2232098 A 19410218 - DEICHMAN GEORGE A
- [Y] PATENT ABSTRACTS OF JAPAN vol. 016, no. 073 (E - 1169) 21 February 1992 (1992-02-21)

Cited by

US6919677B2; WO03034461A1

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MX PA01005525 A 20030820

DOCDB simple family (application)

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