

Title (en)
Cooling system for electric car mounting transformer.

Title (de)
Kühleinrichtung für den Bordtransformator einer elektrischen Lokomotive.

Title (fr)
Système de refroidissement du transformateur de bord d'une locomotive électrique.

Publication
EP 0551554 A1 19930721 (EN)

Application
EP 92107433 A 19920430

Priority
JP 688192 A 19920117

Abstract (en)
For obtaining an incombustible and safe cooling system for an electric car mounting transformer in which the cooler installation position in the electric car is not limited, the cooling system comprising a cooler 23 for refrigerant 25 for cooling a transformer 21, and a circulating blower 22 disposed in a pipe 24 connected between the transformer 21 and the cooler 23 for circulating the refrigerant between the transformer and the cooler is arranged such that the refrigerant 24 is an SF6 gas and that the cooler is mounted to electric car body side wall, top wall or front and rear end walls so that it is cooled by a fan or running wind. Therefore, the cooling system is incombustible, mounting space for another electrical equipment increases and the degree of freedom of cooler lay out increases. Also, noise can be reduced by disposing a gas circulating blower within the transformer tank, and refrigerant gas filling operation in site is made unnecessary by providing the refrigerant pipe with connection portions capable of being opened and closed. <IMAGE> <IMAGE>

IPC 1-7
B61C 3/00; **B61C 17/00**; **H01F 27/20**

IPC 8 full level
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CPC (source: EP)
B61C 3/00 (2013.01); **B61C 17/00** (2013.01); **H01F 27/20** (2013.01)

Citation (search report)

- [A] FR 1146044 A 19571105 - THOMSON HOUSTON COMP FRANCAISE
- [A] US 4241666 A 19801230 - MARCUSSEON LAGE [SE], et al
- [A] EP 0082360 A1 19830629 - MITSUBISHI ELECTRIC CORP [JP]
- [A] US 2638056 A 19530512 - LEON HEIDMANN
- [A] IEEE TRANSACTIONS ON POWER APPARATUS AND SYSTEMS PAS-101 no. 2, 6 July 1982, NEW-YORK pages 2229 - 2235 SATO ET AL. 'cooling effect by gas density of sf6 gas insulated transformer'
- [A] PATENT ABSTRACTS OF JAPAN vol. 7, no. 123 (E-178)(1268) 27 May 1983 & JP-A-58 042 210 (MITSUBISHI DENKI K.K.) 11 March 1983

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DE FR PT

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DOCDB simple family (application)
EP 92107433 A 19920430; JP 9200558 W 19920428; KR 920702153 A 19920907; TW 81103443 A 19920430