

Title (en)  
Masonry structure and associated reinforcement method

Title (de)  
Mauerwerkstruktur und Verfahren zu deren Verstärkung

Title (fr)  
Structure de maçonnerie et procédé de renforcement associé

Publication  
**EP 1045089 A1 20001018 (FR)**

Application  
**EP 00401040 A 20000414**

Priority  
FR 9904842 A 19990416

Abstract (en)  
The system may be used in old churches with stone vault ceilings (10) where the mortar between the stones (14) of the vault deteriorating. It pins the stones and holds them in position. Bores are drilled in each stone from the top surface (17) to withi short distance of the bottom surface (16) and a pin (19) is anchored in each bore. The top ends of the pins extend a considerable distance above the top surface of the vault. A synthetic mortar or cement (1) is poured onto the top surface of the vault, to a depth sufficient to cover the top ends of the pins. The layer of mortar is strong compression, when set, and extends into the spring of the arch (11) to transfer thrust to the wall of the building. The mix is chosen to give a coefficient of thermal expansion as near as possible equal to that of the stones of the vault.

Abstract (fr)  
Procédé de renforcement d'un structure de maçonnerie (10) s'étendant entre deux points d'appui (11) et comprenant une pluralité de pièces (14) mutuellement en compression, chaque pièce (14) se maintenant par frottement sur les pièces (14) adjacentes, dans lequel on ajoute sur une surface supérieure (17) de la structure de maçonnerie un élément travaillant (18) réalisé dans un matériau de coefficient de dilatation et d'élasticité proches de ceux du matériau constituant la structure de maçonnerie (10), et solidarisé avec la dite structure de maçonnerie (10). <IMAGE>

IPC 1-7  
**E04G 23/02**

IPC 8 full level  
**E04G 23/02** (2006.01)

CPC (source: EP)  
**E04G 23/0218** (2013.01); **E04G 23/0233** (2013.01); **E04G 2023/0251** (2013.01)

Citation (search report)  
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• [A] DATABASE WPI Section PQ Week 199604, Derwent World Patents Index; Class Q46, AN 1996-038663, XP002123292  
• [A] RUFFERT G: "DIE KONSTRUKTIVE SANIERUNG VON BAUDENKMALERN", BAUTECHNIK,DE,ERNST & SOHN VERLAG. BERLIN, vol. 71, no. 7, pages 382-389, XP000195309

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