

Title (en)
METHOD FOR BUILDING PRESTRESSED CONCRETE STRUCTURES BY MEANS OF PROFILES CONSISTING OF A SHAPE-MEMORY ALLOY, AND STRUCTURE PRODUCED USING SAID METHOD

Title (de)
VERFAHREN ZUM ERSTELLEN VON VORGESpanNTEN BETONBAUWERKEN MITTELS PROFILen AUS EINER FORMGEDÄCHTNIS-LEGIERUNG, SOWIE BAUWERK, HERGESTELLT NACH DEM VERFAHREN

Title (fr)
PROCÉDÉ DE PRODUCTION DE STRUCTURES EN BÉTON PRÉCONTRAI NT AU MOYEN DE PROFILÉS EN ALLIAGE À MÉMOIRE DE FORME, ET STRUCTURE FABRIQUÉE SELON LEDIT PROCÉDÉ

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Abstract (en)
[origin: CA2908895A1] The invention relates to a method according to which a profile consisting of a shape-memory alloy is placed into concrete, or a concrete to be reinforced is roughened on the outside, then profiles (2) consisting of a shape-memory alloy are fastened to the roughened outside (9) of the structure (6) and a cementitious matrix is applied to the roughened outside (9) to cover the profiles (2). After the cementitious matrix has set, said profiles (2) produce a contraction force and thus a tension as a result of the input of heat. The mortar covering layer (16) thereby acts as a reinforcement layer owing to the interlocking of the mortar covering layer (16) with the roughened outside (9) of the structure (6). The profiles (2) run in an outer mortar as a reinforcement layer (16) of the outside of a structure along the outside of the structure inside the mortar or reinforcement layer (16). A structure can also be prepared for a prestress in the equipped mortar or reinforcement layer by the input of heat, in that electrical cables (3) are routed from the end regions thereof to the outside of the mortar or reinforcement layer (16) or the end regions of the electrical cables (3) are accessible by removing inserts (5).

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