

Title (en)
WATER-DAM-WALL SUPPORT-STRUCTURE FOR A DAM AND METHOD FOR UPGRADING AND/OR REPAIRING A DAM INCLUDING STOPPAGE OF WATER LEAKAGES

Title (de)
WASSERDAMMWANDSTÜTZSTRUKTUR FÜR EINEN DAMM UND VERFAHREN ZUM AUFRÜSTEN UND REPARIEREN EINES DAMMES EINSCHLIESSLICH DES STOPPENS VON WASSERLECKAGEN

Title (fr)
STRUCTURE DE SUPPORT DE MUR DE BARRAGE HYDRAULIQUE POUR BARRAGE ET PROCÉDÉ DE MISE À NIVEAU ET/OU DE RÉPARATION D'UN BARRAGE COMPRENANT L'ARRÊT DE FUITES D'EAU

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Application
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Abstract (en)
[origin: WO2019197402A1] A method for upgrading and/or repairing a dam (1, 30), the dam (1, 30) being provided for damming a reservoir of water (2) and having a dam wall (3) the bottom (4) thereof being founded on a ground (5); whereby said method comprises the following steps: Formation of a support structure (6) on a side (7) of the dam wall (3) facing away from the reservoir of water (2); whereby the support structure (6) defines at least one pressure-tight space (8) being bounded by the dam wall (3); Applying pressure above atmospheric pressure to the pressure-tight space (8), so that the penetration of water into the pressure-tight space (8) through the dam wall (3) is at least minimized. At complete pressure- balance the water-leakages are being stopped. Furthermore, a dam (1, 30) for damming a reservoir of water (2), comprising: a dam wall (3), the bottom (4) thereof being founded on a ground (5); and a support structure (6) being arranged on a side (7) of the dam wall (3) facing away from the reservoir of water (2); whereby the support structure (2) is configured to define at least one pressure-tight space (8) being bounded by the dam wall (3), and wherein pressure above atmospheric pressure is applied to the pressure-tight space (8), so that the penetration of water into the pressure-tight space (8) through the dam wall (3) is minimized, preferably stopped. Any pressure above atmospheric pressure in the pressure-tight space (8) will result in hydraulic support/reduction of forces of the dam-wall (3). The support structure (6) further provides mechanical support and can be combined with a spill-water run-off chute (33) which prevents the near dam downstream river-bed from being eroded in form e.g. of a deep "Plunge-Pool" which may cause structural damage to the dam-wall (3).

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