

A method and a device for covering and waterproofing joints between concrete members (12, 14) of hydraulic works, such as dams, canals, hydraulic galleries and reservoirs. A flexible cover strip (17) comprising a flexible waterproofing membrane (21) in elastomeric material having a first elastic modulus (F.I), and at least one flexible support layer (23) in synthetic material having a second elastic modulus (II2) greater than the first elastic modulus (1:1) for limiting deformation of the impermeable membrane (21), is straddled between the opposite concrete members (12, 14), for example at vertical joints and/or at longitudinal joints of the hydraulic work, The support layer (23) and the waterproofing membrane (21) are transversely folded in a loop and laid down inside and/or outside the joint sealingly fastening the cover strip (17) to the concrete members (12, 14) along the edges thereof. Movements between concrete members (12, 14) of the joint (16) are compensated by a free extension of the folded cover strip (17).