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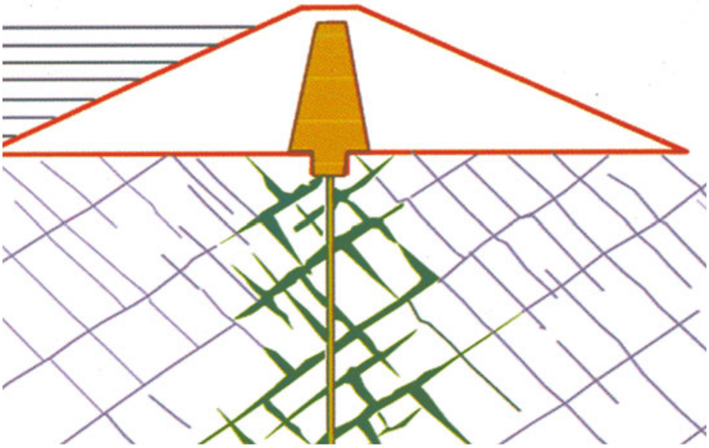
Rock Grouting at Dam Sites



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Rock Grouting at Dam Sites

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Task

Grouting is the usual method to seal a permeable dam foundation. In spite of alternative technologies—diaphragm walls, for instance—many sites will remain whose conditions still favour conventional grouting. Dam foundation grouting today is mostly rock grouting. The decision to grout is usually based on the results of water pressure tests (WPT), and it is assumed that the permeability can be reduced by means of grouting to the desired degree. The possibility to press grout suspension into the rock was supposed to confirm both the need and the success of a grouting program. This concept resulted in many inconsistencies. It is prudent to establish a new one: WPT-results should not be the only basis for the decision to grout, the hydrogeological setting of the whole foundation should be also considered. Rock types are not equally groutable but have individual groutabilities which only permit a specific reduction of their permeability. Grouting pressures should not be related to depth but to both the individual geological setting and the purpose of a grouting program.

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