

عنوان مقاله:

Engineering Challenges in Abutment Stability Studies of Karun IV Arch Dam under Seismic Loads

محل انتشار:

اولین کنفرانس بین المللی و سومین کنفرانس ملی سد و نیروگاههای برق آبی (سال: 1390)

تعداد صفحات اصل مقاله: 10

نویسندگان:

ALI REZA MANAFPOUR - Assistant Professor Dept of Civil Engineering, Urmia University, Urmia, Iran

AMIR FARAJI AZAD - Project Director Mahab Ghodss Consulting Engineering Co., Tehran

MOHAMMAD ALI KARIMI - Structural Engineer Mahab Ghodss Consulting Engineering Co., Tehran

MEHRDAD ZARGARI - Rock Mechanic Engineer Mahab Ghodss Consulting Engineering Co., Tehran

خلاصه مقاله:

Large dams are among the most important structures that their safety is of prime concern not only for dam engineers and owners but also for the general public. Since the early days of engineered dams there have been significant advances in design and analysis tools as well as construction technologies. However due to the extent of parameters involved and their interconnections, providing safety for a large dam is still a challenging issue. This paper reports some important technical issues in the design of Karun IV double arch concrete dam in Iran, more specifically with regards to the stability of the dam abutments. The dam is the highest dam in Iran with the height of 230m from its base and impounded in March 2010. The dam site is located in a highly seismic area with locally complex geological and geotectonic conditions. The abutment stability studies turned into a major design issue during the detail design stage and the construction period. Considerable efforts were put in place to investigate and refine the geomechanical and seismic design parameters. These included special rigorous site investigations by setting up a rock engineers-rock climbers team, using different methods of analyses and setting up various technical review committees and expert panels. The paper briefly introduces the main specifications of the project, reviews the approaches used in dealing with abutment stability concerns and summarizes the experiences achieved.

کلمات کلیدی:

Arch Dam, Karun IV, Abutment Stability, Seismic Design, Design Uncertainties

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/138645>

