**Li Zhuang (Ли Чжуан) руководитель Алабугина Р.А., ЮУрГУ**

**Study on influence of different soil foundations on seismic response of sluices**

**ABSTRACT**

 On the basis of statics, a sluice model that meets the objective requirements is established, and the model is optimized from three aspects of damping, boundary conditions, and seismic wave input, and a relatively complete seismic dynamic analysis model of the sluice is established. The time-history analysis method is selected to carry out the dynamic analysis of the sluice, and the calculation is realized through the ANSYS finite element analysis software. The dynamic calculation and analysis of ten soil-based sluices under two working conditions of no water and normal water retention are carried out, and the law of the influence of different soil qualities on the overall dynamic response of the sluice is obtained; three parameters for soil quality: density, elastic modulus, Poisson's ratio, the law of the influence of the changes of three parameters on the dynamic response of the entire structure of the gate body is obtained.

TW contains energy research management: The analysis strong and weaknesses of application of analysis and research on earthquake response of sluices on soil foundation, opportunities and threats of its application on power generation facility; K. Levin's field of driving and restraining forces determining the success of the development and application of research in the electric power industry; Gantt's schedule of actions for implementation of application of Analysis and research on earthquake response of sluices on soil foundation.