汽轮机单阀-顺序阀切换造成电力系统振荡分析

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摘要：针对因汽轮机单阀与顺序阀切换造成功率波动、电力系统振荡的事故，介绍了汽轮机进行单阀-顺序阀切换的原因，通过对造成功率波动的原因分析，指出根据现场实际测量的阀门流量特性进行汽轮机调速系统参数设置是解决负荷波动的最根本办法，在现场条件不具备的情况下，选择合适的操作方式、切换时间和蒸汽参数也能很好的控制负荷波动。

关键词：汽轮机；单阀运行；顺序阀运行；单阀-顺序阀切换；电力系统振荡

Analysis of Power System Oscillation by Turbine Single/Sequence Valve Switching

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Abstract: Aiming at an accident that single/sequential valve switching operation of steam turbine has caused power flutuation and power system oscillation, the reason of single/sequential valve switching operation and valve switching theory are introduced. By analyzing the causes of power flutuation, it is pointed out that the essential means to resolve the power flutuation is setting up the valve settings for steam turbine governing system according to the actual measured valve flow characteristics. Alternatively, an appropriate selection of operation mode, switching time and steam parameter can also keep the power flutuation under control.

Key words: steam turbine; single valve operation; sequence valve operation; single/sequential valve switching; power system oscillation