

Modeling a high output marine steam generator feedwater control system which uses parallel turbine-driven feed pumps (PDF)

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Title: Modeling a high output marine steam generator feedwater control system which uses parallel turbine-driven feed pumps

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摘要: Parallel turbine-driven feedwater pumps are needed when ships travel at high speed. In order to study marine steam generator feedwater control systems which use parallel turbine-driven feed pumps,a mathematical model of marine steam generator feedwater control system was developed which includes mathematical models of two steam generators and parallel turbine-driven feed pumps as well as mathematical models of feedwater pipes and feed regulating valves. The operating condition points of the parallel turbine-driven feed pumps were calculated by the Chebyshev curve fit method. A water level controller for the steam generator and a rotary speed controller for the turbine-driven feed pumps were also included in the model. The accuracy of the mathematical models and their controllers was verified by comparing their results with those from a simulator.

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参考文献/REFERENCES

1. ZHOU Gang.PENG Wei.ZHANG Dafa Analysis of waterlevel control methods for nuclear steam generator [期刊论文] -Atomic Energy Science and Technology2004(zk)
2. SHI Ji.JIANG Mingyu.ZHENG Jianchao The keytechnology for water level controller of steam generator innuclear power plant [期刊论文] -Measurement and Control Technology2003(06)
3. CUI Zhenhua.JIA Dounan.CHEN Xuejun Modelingand dynamic simulation of U-Tube steam generator 1992
4. KERLIN T W.KATZ E M.FREELS J Dynamicmodeling of nuclear steam generator 1976(09)
5. BAI Chengchun Testing and study of governingcharacteristics of steam turbine-driven feed-water pump for300 MW generating unit [期刊论文] -Electric Power2003(07) 6. Steam Generator Compile Group Steam Generator 1982
7. LI Shijin Engineering fluid mechanics 1989
8. GAO Puzhen.PANG Fengge pumps in nuclear powerplant 2004

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