

UOHUA POWER Dingzhou Power plant Reconstruction Project



QUICK PIPE STRESS ANALYSIS & OPTIMAL SIZING

COMPANY PROFILE



中国电建集团河北省电力勘测设计研究院有限公司
POWERCHINA HEBEI ELECTRIC POWER ENGINEERING CO.,LTD.

PowerChina Hebei Electric Power Engineering Co., LTD

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Power China Hebei Electric Power Survey and Design Research Institute Co., Ltd. is a subsidiary of China Power Construction Group Co., Ltd. Founded in 1958. It is a national Class A survey and design unit and one of the top 100 national survey and design comprehensive companies.

The scope of business covers power system planning, power generation projects (coal, gas, geothermal, biomass, wind, solar, garbage power generation, etc.) and power transmission and transformation projects, as well as industrial and civil construction projects, geotechnical engineering survey design, technology Consulting, project supervision, general project contracting, etc/

Field of activities

Power and District Heating

Project Description

Region

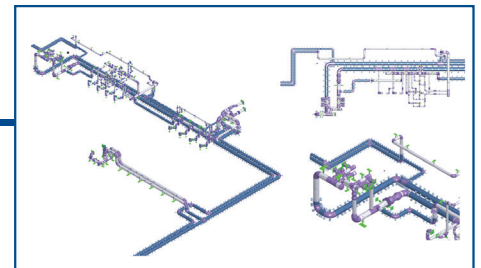
Dingzhou City, Hebei Province, P.R. China

Dates

2020-2021

PASS software used

PASS/START-PROF



Scope

The reconstruction project includes the expansion, transformation and optimization of the original heat supply network main station, the addition of 2 sets of 50 MW Condensing and back pressure turbine generator units, 2 sets of demisting mechanical cooling towers (6 groups), cooling water system and the related ancillary equipment, etc.

Project Specific

The original power plant had a limited space, while the new DN2000 pipe had to be set underground. Current local company is able to design only DN1400 pipes in the normal project. The buried pipe had to be placed under the road; the steel jacket pipe needs to be used to support the big surface load. Big size steel jacket PUR pipe is the main challenge.

How PASS software helped in the project execution

PASS/START-PROF has been used to model all pipes for this reconstruction project. PASS/START-PROF strong buried pipe analysis ability offers the chance to analysis DN2000 PUR buried pipe.

Embedded "Elements" module used to check surface load helped to calculate a more accurate jacket and to adjust pipe thickness.

Results

The project design is in its final stage; all pipes and equipment are being installing on site.

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