

Annotation

This graduation project has been completed on the subject of «Designing an Air-Cooled Turbogenerator». Basically, hydrogen cooling is used for this power. Despite the advantages of hydrogen cooling, there is now a tendency to switch to air cooling. It includes the following sections: Electromagnetic, thermal, mechanical calculations, technological section, economic part, life safety.

In a special part of the project, the thermal calculation of the stator and rotor of the turbogenerator is carried out, the excess of copper temperatures over the ambient temperature is calculated.

In the economic part, the efficiency of modernization of a turbogenerator is evaluated.

In the section Life safety acoustic calculation of noise and vibration of sound pressure level is carried out, as well as measures to reduce noise.