

## 300 MW power plant exercise

The exercise can be summarized as follows:

In a 300 MW power plant a pump compresses 245 kg/s of water from 29 °C and 0,04 bar, to the high pressure of 169 bars.

The pump is supposed to be isentropic.

Water is vaporized and superheated in a boiler, and enters the turbine at 542 °C

The isentropic expansion efficiency is equal to 0,85

The objective is to study the cycle