**Abbreviations**

Deaerator – means here “de-air equipment”

EKN – electro-condensate pump

EPN – electro-feed-water pump

MCP – main condensate pump

PND – lower pressure heater (LPH)

PS – network heater

PVD – higher pressure heater (HPH)

SimInTech – Simulation In Technical Systems

STP – steam-turbine plant (model of)

TPP – Thermal Power Plant (name of the thermodynamical code, which is used)

# Statement of the Problem

## Basic Data

Specifications of JSC Kaluga Turbine Works have been used herein as basic data: “Steam Turbine Plant ТК-35/38-3,4. ИРЕЦ 624121.001ТУ”.

In accordance with the basic data the following rated parameters of steam turbine plant are accepted for modeling:

Steam pressure upstream of the turbine: 35 kgf/cm2.

Flow of main steam for the turbine: 220 t/h = 61.111 kg/s

Steam temperature upstream of steam turbine plant shut-off valves: 285 °С

Heating steam flow in the 1st extraction (to PHP No. 3): 10 t/h

Heating steam flow in the 12nd extraction (to PHP No. 2): 13 t/h

Heating steam flow in the 3rd extraction (to PLP No. 1): 18.4 t/h

Steam flow from adjustable turbine heat extraction: 66.6 t/h

Steam pressure in condenser: 0.005 MPa = 0.051 kgf/cm2

Condensate temperature: 32 °С

Steam pressure in the 1st extraction: 0.913 MPa = 9.2 kgf/cm2, steam temperature: +170 °С

Steam pressure in the 2nd extraction: 0.35 MPa = 3.6 kgf/cm2, steam temperature: +140 °С

Steam pressure in the 3rd extraction: 0.094 MPa = 0.96 kgf/cm2, steam temperature: +91 °С

Steam flow from adjustable heat extraction at the intermediate circuit heater:   
52 t/h = 14.444 kg/s

Note: main initial data are given herein. As the model is created other equipment parameters and characteristics will be added.