$$m_{krajnji\ pot} = 5{,}34\ \ t/h$$

$$h_{krajnji\_potr} = 2757{,}80\ kJ/kg$$

$$t_1 = 85°C$$

$$m_{nakon\_kra\_pot} = 0{,}9 * 5{,}34 = 4{,}81\ t/h\ (50\%)$$

$$M_{gorivo} = 0{,}1145\,\frac{kg}{s}$$

$$GOM = 42\,\frac{MJ}{kg}$$

$$\eta kotao = 82{,}93\%$$

$$h_{pare_{kotao}} = 2759{,}2\,\frac{kJ}{kg}$$

$$t_{pojne_{vode}} = 47{,}21\ °C$$

x= 5%

y=5%

t2 =82°C

$$m_{zamjenske_{vode}} = 3{,}76\,\frac{t}{h}$$

$$t_{zamjenske_{vode}} = 25°C$$

$$n_{parni_{sustav}} = \frac{E_{krajnji\_korisnik}}{E_{gorivo}} = \frac{m_{kp} * h_{kp} - m_{nkp} * 4{,}21 * t_1}{M_{gorivo} * GOM}$$

$$= \frac{5{,}34 * \frac{1000}{3600}\frac{kg}{s} * 2757{,}8\frac{kJ}{kg} - 4{,}81 * \frac{1000}{3600}\frac{kg}{s} * 4{,}21\ \frac{kJ}{kg\ °C} * 85°C}{0{,}1145\,\frac{kg}{s} * 4200\,\frac{kJ}{kg}} = \frac{361261}{4809}$$

$$= 75{,}12\ \%$$

$$n_{kotao} = \frac{mp_{kotao}\ (h_{p\ kotao} - 4{,}21 * t_{pojne_{vode}})}{M_{gorivo} * GOM}$$

$$mp_{kotao\ (izlaz)} = \frac{n_{kotao}\ *\ M_{gorivo} * GOM}{hp_{kotao}\ - 4{,}21 *\ t_{pv}} = 1{,}56\,\frac{kg}{s}$$

$$n_{sustav\ za\ distrib\ pare} = \frac{E_{kk}}{mp_{kotao} *\ h_{pkotao}} = \frac{3612{,}61\,\frac{kJ}{s}}{1{,}56\,\frac{kg}{s} * 2759{,}2\,\frac{kJ}{kg}} = 83{,}93\ \%$$

$$m_{pv} = 1{,}1 * mp_{kotao} = 1{,}1 * 5{,}61 = 6{,}17\,\frac{t}{h}$$

1,1 zato sto se 10% gubi do kotla

$$n_{pk} = \frac{m_{na_{kon_{kraju_{pot}}}} * 4{,}21 *\ t_2}{m_{zamjenske_{vode}} * 4{,}21 *\ t_{zamjenske_{vode}} +\ mn_{zp} * 4{,}21 * t_1}$$

$$= \frac{0{,}5\ (samo\ se\ 50\%\ vraca) * 4{,}81\,\frac{t}{h} * 4{,}21\,\frac{kJ}{kg} * 82°C}{3{,}76\,\frac{t}{h} * 4{,}21\,\frac{kJ}{kg°C} * 25°C + 4{,}81\,\frac{t}{h} * 4{,}21\,\frac{kJ}{kg°C} * 85°C} = 39{,}21\ \%$$