Příloha č. 6 - Výpočet výkonů vzt jednotek

Zima:

$ext: t_e = -17\ ^0C$

$int: t_i = 22\ ^0C$

$x_e = 0{,}75\ [\frac{g}{kg\ s.v.}]$

$\varphi = 40\ \%$

Zimní provoz:

1) E-2 předehřev pomocí ZZT:

$$\eta = \frac{t_{e2} - t_{e1}}{t_{i1} - t_{e1}}$$

$t_{e2} = \eta * t_{i1} - \eta * t_{e1} + t_{e1} = 0{,}75 * 22 - 0{,}75 * (-17) - 17 = 12\ ^0C$

2) 2-P dohřev

$t_p = 18\ ^0C$

$t_i = 22\ ^0C$

VZT:

HRH 15: $1300\ [m^3/h]$

HRH 20: $1900\ [m^3/h]$

HRH 30: $2800\ [m^3/h]$

1.

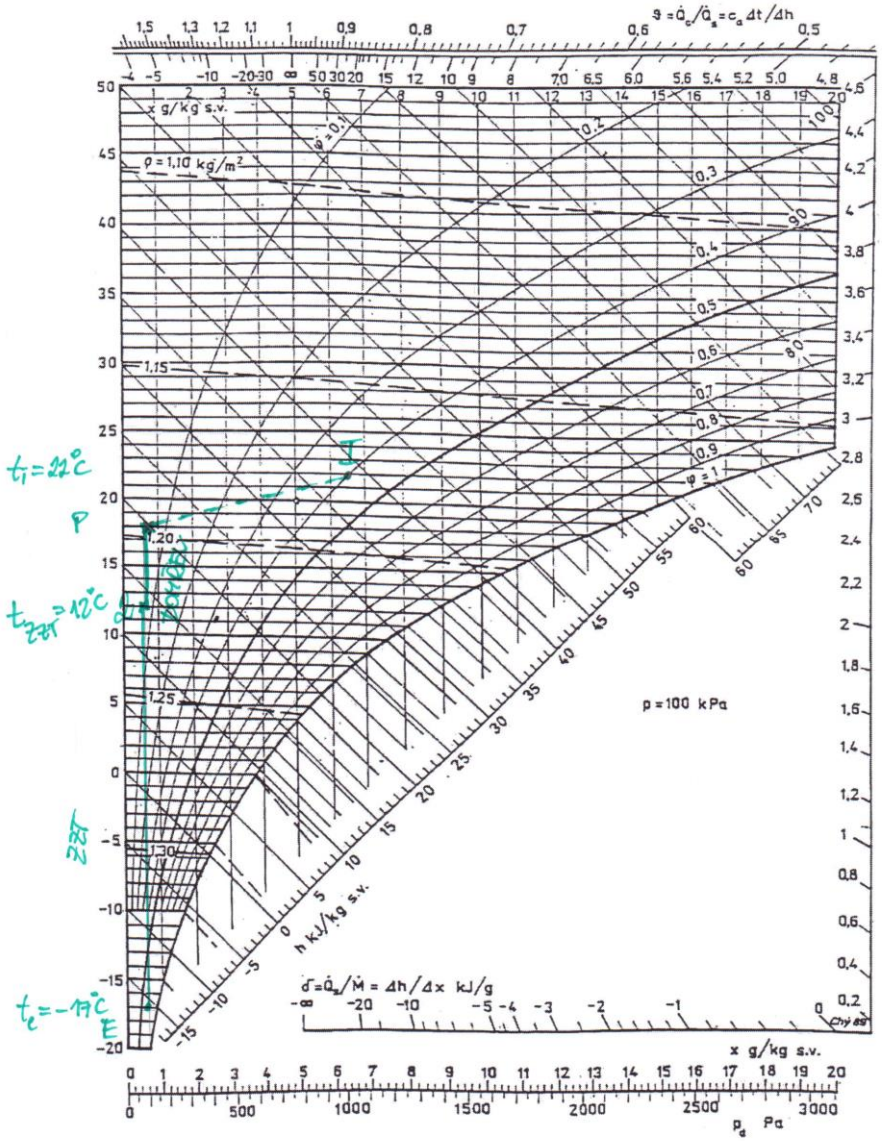
HRH 15: $Q_o = \frac{1300*1{,}2}{3600} * 1{,}01 * (18 - 12) = 2{,}6\ [kW]$

HRH 20: $Q_o = \frac{1900*1{,}2}{3600} * 1{,}01 * (18 - 12) = 3{,}8\ [kW]$

HRH 30: $Q_o = \frac{2800*1{,}2}{3600} * 1{,}01 * (18 - 12) = 5{,}6\ [kW]$

2. 70/50 °C

HRH 15: $Q_o = \frac{1300*1{,}2}{3600} * 1{,}01 * (70 - 50) = 8{,}7\ [kW]$

HRH 20: $Q_o = \frac{1900*1,2}{3600} * 1,01 * (70 - 50) = 12,7\ [kW]$

HRH 30: $Q_o = \frac{2800*1,2}{3600} * 1,01 * (70 - 50) = 18,8\ [kW]$