

### 3.1 Zapotrzebowanie ciepła

pom.  $0,1 + 16 Q = 12,31 \times 50 \times 1,25 \times 0,8 \times 1,15 = 710 + 210 = 920 \text{ w}$   
pom.  $0,2 + 20 Q = 3,18 \times 50 \times 1,25 \times 1,0 \times 1,30 = 260 + 80 = 340 \text{ w}$   
pom.  $0,3 + 20 Q = 52,57 \times 50 \times 1,25 \times 1,0 \times 0,80 = 2630 + 790 = 3420 \text{ w}$   
pom.  $0,4 + 20 Q = 29,87 \times 50 \times 1,25 \times 1,0 \times 0,90 = 1680 + 500 = 2180 \text{ w}$   
pom.  $0,5 + 20 Q = 30,19 \times 50 \times 1,25 \times 1,0 \times 0,80 = 1510 + 450 = 1960 \text{ w}$   
pom.  $0,6 + 20 Q = 10,32 \times 50 \times 1,25 \times 1,0 \times 1,3 = 840 + 250 = 1090 \text{ w}$   
pom.  $0,7 + 24 Q = 2,76 \times 50 \times 1,25 \times 1,25 \times 1,3 = 280 + 80 = 360 \text{ w}$   
pom.  $0,8 + 16 Q = 19,41 \times 50 \times 1,25 \times 0,8 \times 1,0 = 970 + 290 = 1260 \text{ w}$   
pom.  $0,9 + 20 Q = 6,36 \times 50 \times 1,25 \times 1,0 \times 1,3 = 520 + 150 = 670 \text{ w}$   
pom.  $0,10 + 20 Q = 10,25 \times 50 \times 1,25 \times 1,0 \times 1,3 = 290 + 90 = 380 \text{ w}$   
pom.  $0,11 + 20 Q = 15,95 \times 50 \times 1,25 \times 1,0 \times 1,3 = 830 + 250 = 1080 \text{ w}$   
pom.  $0,12 + 20 Q = 16,58 \times 50 \times 1,25 \times 1,0 \times 1,0 = 1040 + 310 = 1350 \text{ w}$   
pom.  $0,13 + 24 Q = 10,35 \times 50 \times 1,25 \times 1,25 \times 1,3 = 1050 + 320 = 1370 \text{ w}$   
pom.  $0,14 + 24 Q = 10,64 \times 50 \times 1,25 \times 1,25 \times 1,3 = 1080 + 320 = 1400 \text{ w}$   
pom.  $0,15 + 20 Q = 16,58 \times 50 \times 1,25 \times 1,0 \times 1,0 = 1040 + 310 = 1350 \text{ w}$   
pom.  $0,16 + 16 Q = 299,14 \times 50 \times 1,25 \times 0,8 \times 0,8 = 11970 + 3590 = 15560 \text{ w}$

Razem 34690 w

W zapotrzebowaniu ciepła, uwzględnione jest ciepło dla wentylacji w ilości n=1,5w/h.

### 3.2 Zapotrzebowanie grzejników

pom. 0.1 Q = 920w C11 - 60 L = 700 szt.1

pom. 0.2 Q = 340w C11 - 45 L = 400 szt.1

pom. 0.3 Q = 3420w C11 - 60 L = 900 szt.3

pom. 0.4 Q = 2180w C11 - 60 L = 900 szt.2

pom. 0.5 Q = 1960w C11 - 60 L = 900 szt.2