

① Bestem I_B Belast skema.

gr.	L_1	L_2	L_3
1	16 A	16 A	16 A
2	10 A	10 A	10 A
3	10 A		
4		10 A	
5			10 A
ΣI_B	36 A	36 A	36 A

$$I_{B_{tavle}} = \sum I_B \times S_f \times U_f = 36 \times 97 \times 1,2 = 30,24 A$$

② Valg af I_n (sikring)

$$I_{B_{tavle}} \leq I_n = 30,24 A \leq 35 A$$

③ Valg af stikkledning

① Billeder : 73 Ref: D₂

Tabel B 52.5 Kol: 8

$$S_1 = 4^0 \quad I_{z_1} = 39 \text{ A}$$

② Billeder : 3 Ref: A1

Tabel : B.52. Kol:

$$S_1 = 6^0 \quad I_{z_1} = 40 \text{ A}$$

④ Kontrol af OB

$$I_{B\text{avle}} \leq I_n \leq I_{z1}$$

$$30,24 \text{ A} \leq 35 \text{ A} \leq 40 \text{ A}$$

⑤ Kontrol af ΔU .

$$R_{L1} = \frac{Q \times L \times 2}{S_1} = \frac{0,0175 \times 23 \times 2}{6} = 0,134 \Omega$$

$$\Delta U = I_{B\text{avle}} \times R_{L1} \times 1,25 = 30,29 \times 0,134 \times 1,25 = 5,1 \text{ V}$$

$$\Delta U : \% = \frac{\Delta U \times 100}{U} = \frac{5,1 \times 100}{400} = 1,2 \% \text{ 3fase}$$

2,2 % 1 Fase

① Bestem I_B

	L_1	L_2	L_3
1	16	16	16
2	10	10	10
3	10		
4		10	
5			10
6	10		
7		13	13
ΣI_B	46	49	49

$$I_{B\text{avle}} = \Sigma I_B \times u_f \times s_f$$

$$= 49 \times 0,7 \times 1,2$$

$$= \underline{\underline{41,16 \text{ A}}}$$

$$s_f = 0,7$$

$$u_f = 1,2$$

② Valg af I_n

$$I_{B\text{tavle}} \leq I_n = 41,16 \text{ A} \leq 50 \text{ A}$$

③ Valg af S_1 , $I_n \leq I_2$

1. Billede : 73 Ref: D2

Tabel B52.5 Kol: 8

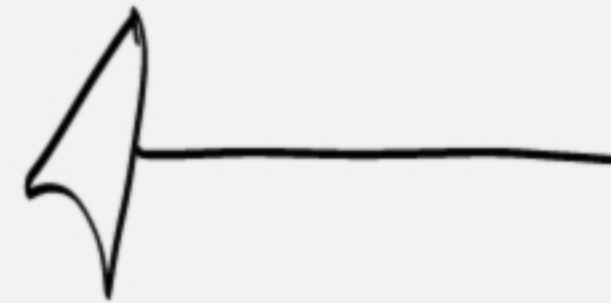
$$S_1 = 10^3 I_{2,1} = 65 \text{ A}$$

2. Billede 8/9 Ref: B2

Tabel B52.5

$$S_1 = 10^3 I_{2,1} = 60 \text{ A}$$

Kol: 5



④ Kontrol af OB

$$I_{B_{\text{taale}}} \leq I_n \leq I_z \Rightarrow 41,16 \text{ A} \leq 50 \text{ A} \leq 60 \text{ A}$$

OB OK.

⑤ Kontrol af ΔU

$$R_{l_1} = \frac{q \times L \times 2}{S_1} = \frac{0,0175 \times 27 \times 2}{10} = 0,0945 \Omega$$

$$\Delta U = I_{B_{\text{taale}}} \times R_{l_1} \times 1,25 = 41,16 \times 0,0945 \times 1,25 = 4,86 \text{ V}$$

$$\Delta U, \% = \frac{\Delta U \times 100}{U} = \frac{4,86 \times 100}{400} = 1,2 \% \text{ v. } 400 \text{ V}$$

2,11 % v. 230 V

① Bestem I_B

$$I_B = 8A$$

② Valg af I_n

$$I_B \leq I_n = 8A \leq 10A$$

③ Valg af S_1

Billede: 32 Ref: E

Tabel B.52.12 Hol: 2

$S_1 = 1,5^\circ$ $I_{2,1} = 26 \text{ A}$

Temp: 35°C

Tabel B52.14 $k_{ft} = 0,96$

Antal kobber = 3 stk

Tabel B.52.17 $k_{fs} = 0,82$

$$\begin{aligned} I_{2k_1} &= I_{2,1} \times k_{fs} \times k_{ft} \\ &= 26 \times 0,82 \times 0,96 \\ &= 20,47 \text{ A} \end{aligned}$$

④ Kontrol af OB

$$I_B \leq I_n \leq I_{Z_k} = 8A \leq 10A \leq 20,47A$$

⑤ Kontrol af ΔU .

$$R_{L_1} = \frac{\Phi \times 2 \times L}{S_1} = \frac{0,0175 \times 30 \times 2}{1,5} = 0,7 \Omega$$

$$\Delta U = I_B \times R_{L_1} \times 1,25 = 8 \times 0,7 \times 1,25 = 7V$$

$$\Delta U \text{ i } \% = \frac{\Delta U \times 100}{U} = \frac{7 \times 100}{230} = 3,04\%$$

① Bestem I_B

$$I_B = \frac{P}{U} = \frac{2500}{230} = 10,87 \text{ A}$$

② Valg af I_n

$$I_B \leq I_n \Rightarrow 10,87 \text{ A} \leq 13 \text{ A}$$

③ Valg af S_1

Billede 8/9 Ref: B_2

Tabel B.52.3 Kol: 5

$$S_1 = 1,5^\circ \quad I_{Z_1} = 22 \text{ A}$$

Temp: 32°C $k_{ft} = 0,96$

Antal kabler: 2 stk $k_{fs} = 0,8$

$$I_{Zk_1} = I_{Z_1} \times k_{ft} \times k_{fs} = 22 \times 0,8 \times 0,96 = 16,89 \text{ A}$$

④ Valg af S_2 (Tilledning)

$$S_2 = 1,5^\circ \quad I_{z_2} = 16 \text{ A}$$

$$I_{zk_2} = I_{z_2} \times k_{ft} = 16 \times 0,96 = \underline{\underline{15,3 \text{ A}}}$$

⑤ Kontrol af OB

$$S_1 = I_B \leq I_n \leq I_{zk_1} = 10,86 \text{ A} \leq 13 \text{ A} \leq 16,89 \text{ A}$$

$$S_2 = I_B \leq I_n \leq I_{zk_2} = 10,86 \text{ A} \leq 13 \text{ A} \leq 15,3$$

⑥ Kontrol af ΔU

$$R_{l1} = \frac{0,0175 \times 2 \times 35}{1,5} = 0,81 \Omega$$

$$R_{l2} = \frac{0,0175 \times 2 \times 2}{1,5} = 0,046 \Omega$$

$$\Sigma R_l = R_{l1} + R_{l2} = 0,856 \Omega$$

$$\Delta U = 10,86 \times 1,25 \times 0,856 = 11,62 \text{ V}$$

$$\Delta U; \% = \frac{\Delta U \times 100}{U} = \frac{11,62 \times 100}{230} = 5,05 \%$$