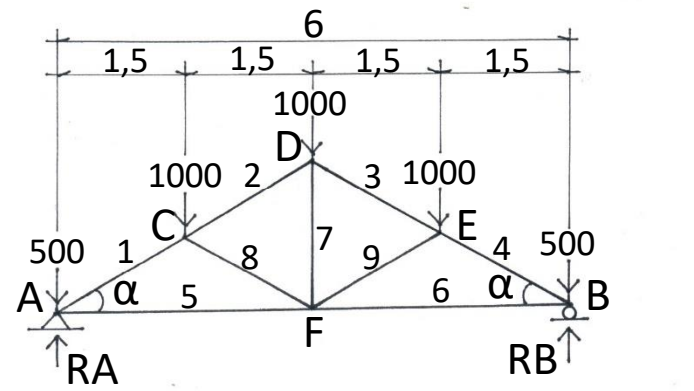
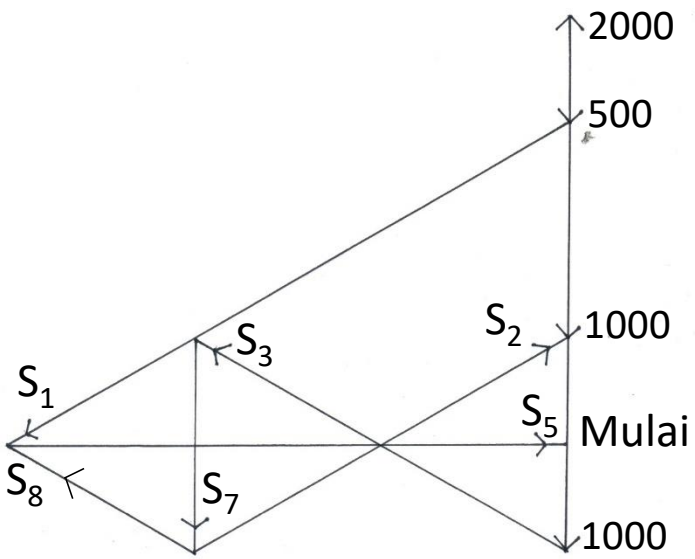
8.2 METODE CREMONA

8.2.1 Hitung gaya-gaya batang dengan metode cremona





RA = RB = 500 + 1000 + 0,5. 1000 = 2000 kg

$\alpha = 30^o$

Skala → 200 kg = 1 cm

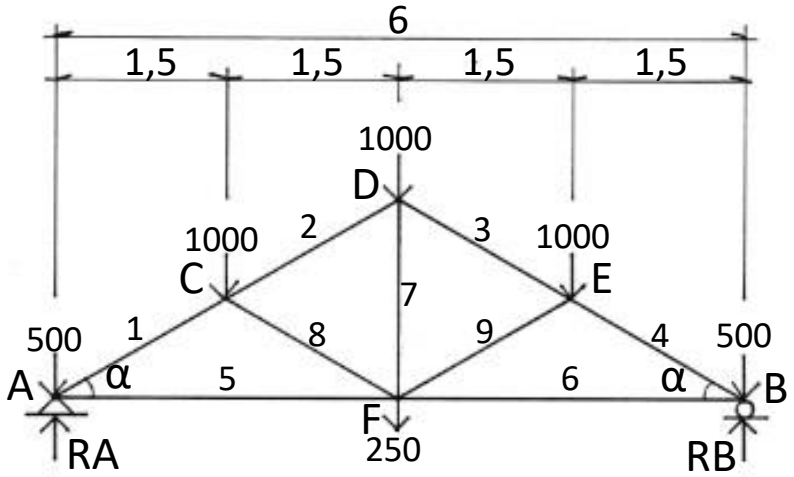
$S_1 = S_4 = 3020$ kg (-)

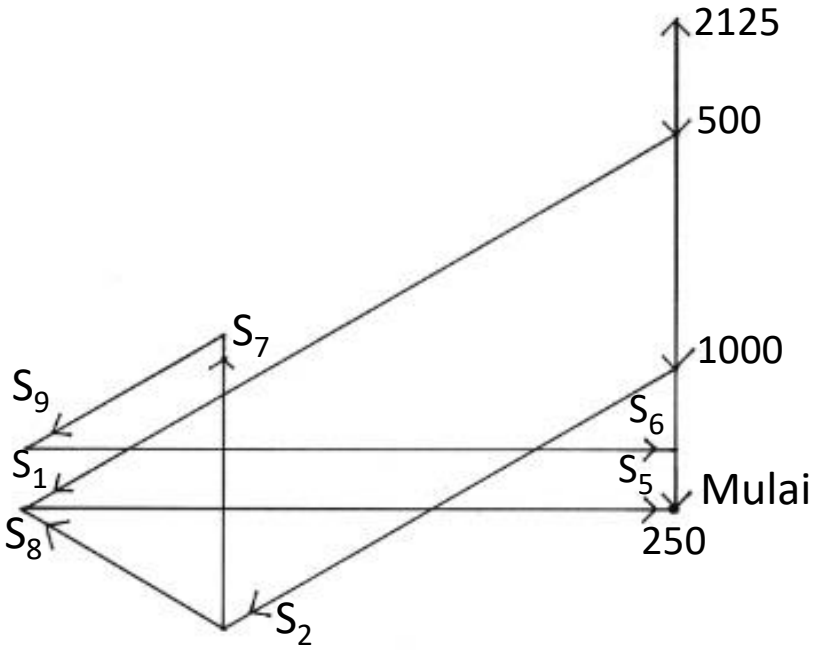
$S_5 = S_6 = 2600$ kg (+)

$S_2 = S_3 = 2020$ kg (-)

$S_8 = S_9 = 1020$ kg (-)

8.2.2 Hitung gaya-gaya batang dengan metode cremona





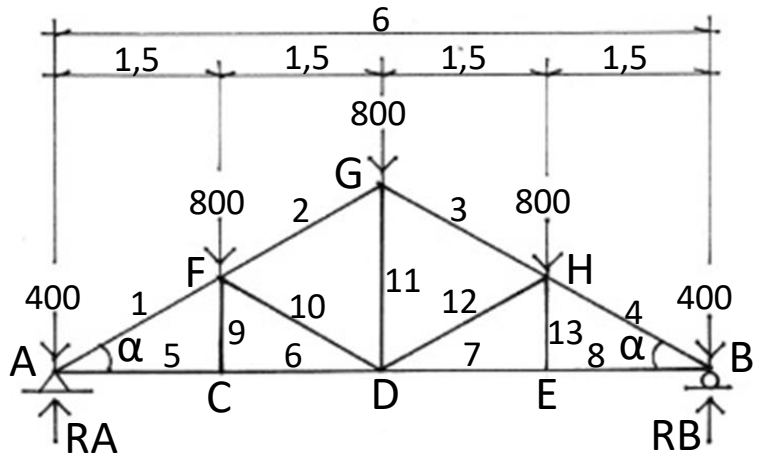
α = 30°

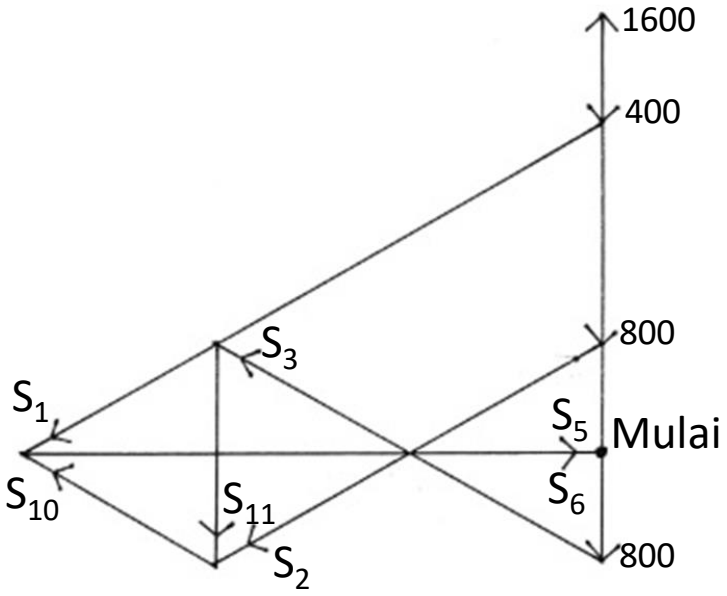
RA = RB = 500 + 1000 + 0,5. 1000 + 0,5. 250
= 2125 kg

Skala → 250 kg = 1 cm

$S_1 = S_4 = 3300$ kg (-)
$S_5 = S_6 = 2850$ kg (+)
$S_2 = S_3 = 2275$ kg (-)
$S_8 = S_9 = 1025$ kg (-)
$S_7 = 1275$ kg (+)

8.2.3 Hitung gaya-gaya batang dengan metode Cremona





α = 30°

RA = RB = 400 + 800 + 0,5. 800 = 1600 kg

Skala → 200 kg = 1 cm

$S_1 = S_4 = 2450$ kg (-)

$S_5 = S_8 = 2140$ kg (+)

$S_6 = S_7 = 2140$ kg (+)

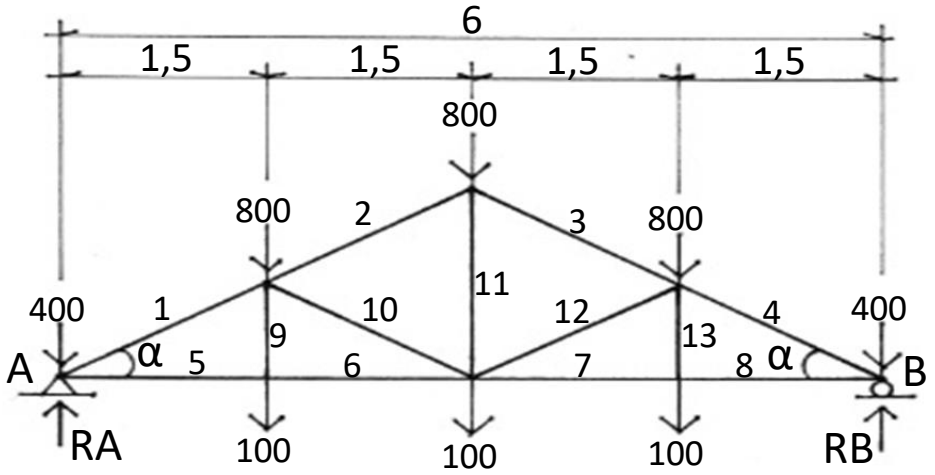
$S_9 = S_{13} = 0$

$S_2 = S_3 = 3280$ kg (-)

$S_{10} = S_{12} = 820$ kg (-)

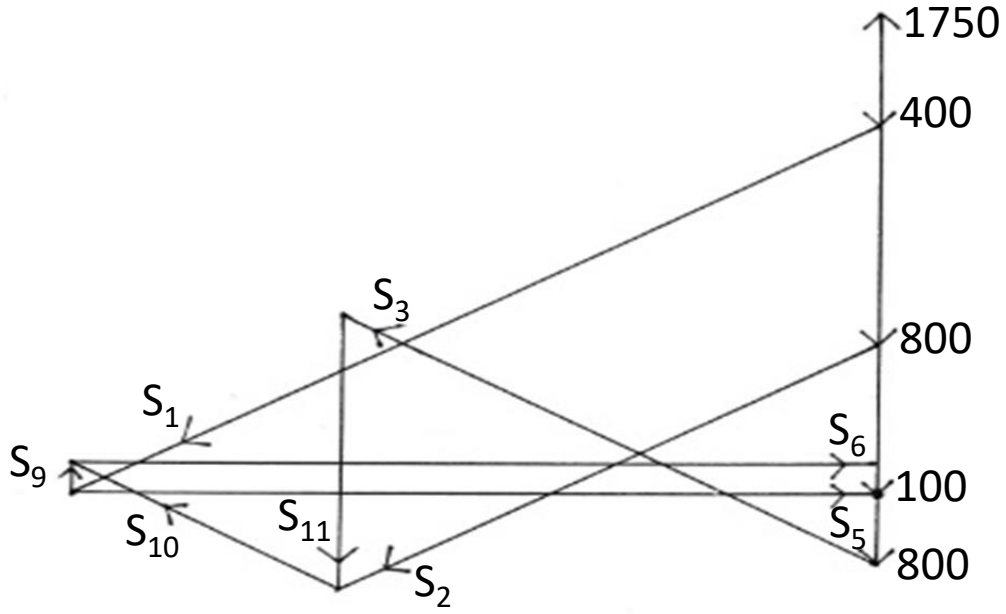
$S_{11} = 820$ kg (+)

8.2.4 Hitung gaya-gaya batang dengan metode Cremona



α= 30°

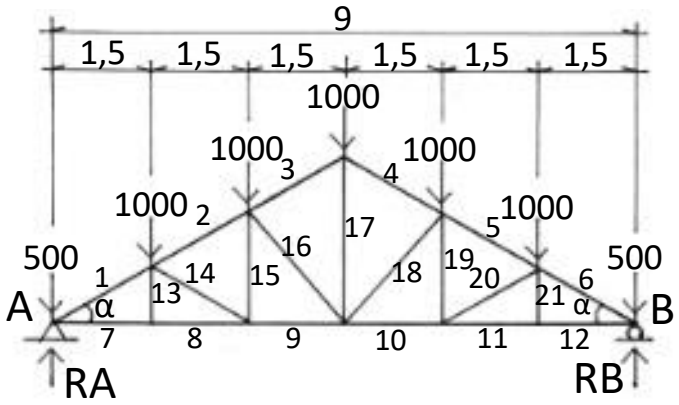
RA = RB = 400 + 800 + 0,5. 800 + 100 + 0,5. 100
= 1750 kg



Skala → 200 kg = 1 cm

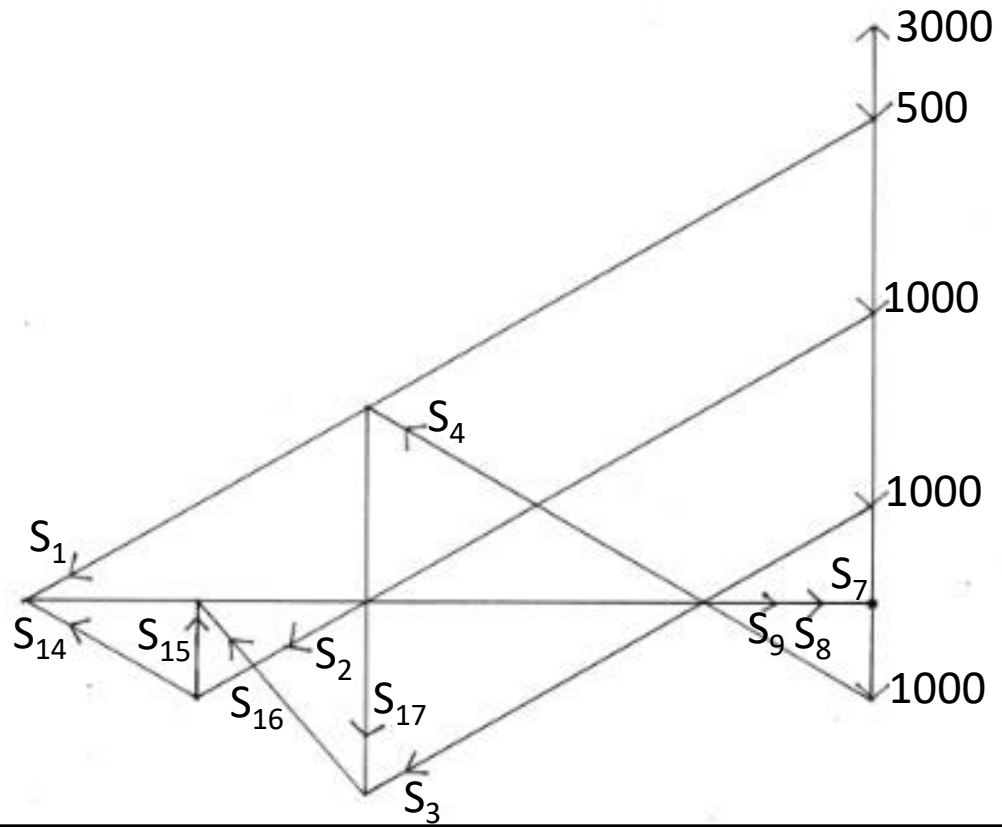
$S_1 = S_4 = 2720$ kg (-)
$S_5 = S_8 = 2360$ kg (+)
$S_9 = S_{13} = 110$ kg (+)
$S_6 = S_7 = 2360$ kg (+)
$S_2 = S_3 = 1820$ kg (-)
$S_{10} = S_{12} = 920$ kg (-)
$S_{11} = 1000$ kg (+)

8.2.5 Hitung gaya-gaya batang dengan metode Cremona



α = 30°

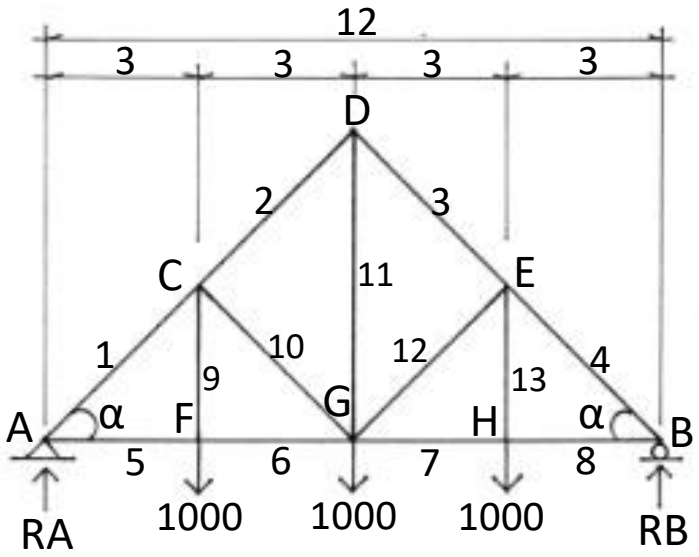
RA = RB = 500 + 1000 + 1000 + 0,5. 1000 = 3000 kg



Skala → 250 kg = 1 cm

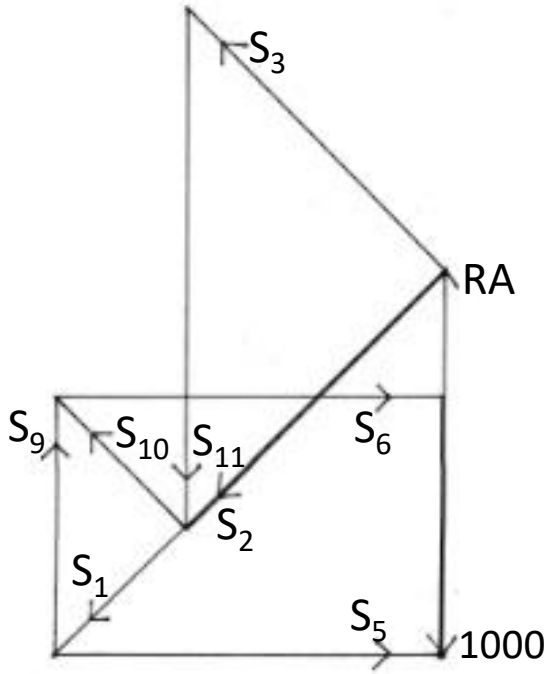
$S_1 = S_6 = 5500$ kg (-)
$S_7 = S_{12} = 4375$ kg (+)
$S_{13} = S_{21} = 0$
$S_8 = S_{11} = 4375$ kg (+)
$S_9 = S_{10} = 3475$ kg (+)
$S_2 = S_5 = 4000$ kg (-)
$S_{14} = S_{20} = 1000$ kg (-)
$S_{15} = S_{19} = 500$ kg (+)
$S_3 = S_4 = 3000$ kg (-)
$S_{16} = S_{18} = 1325$ kg (-)
$S_{17} = 2000$ kg (+)

8.2.6 Hitung gaya-gaya batang dengan metode Cremona



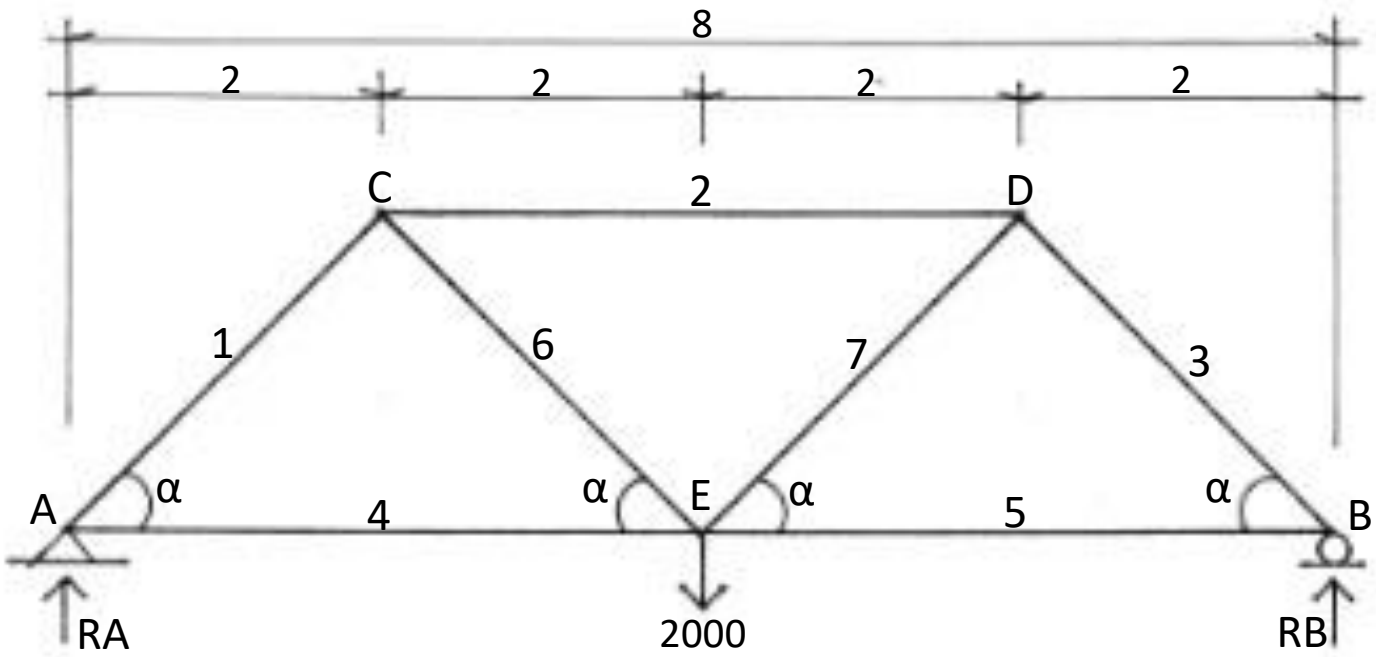
α = 45°

RA = RB = 1000 + 0,5. 1000 = 1500 kg



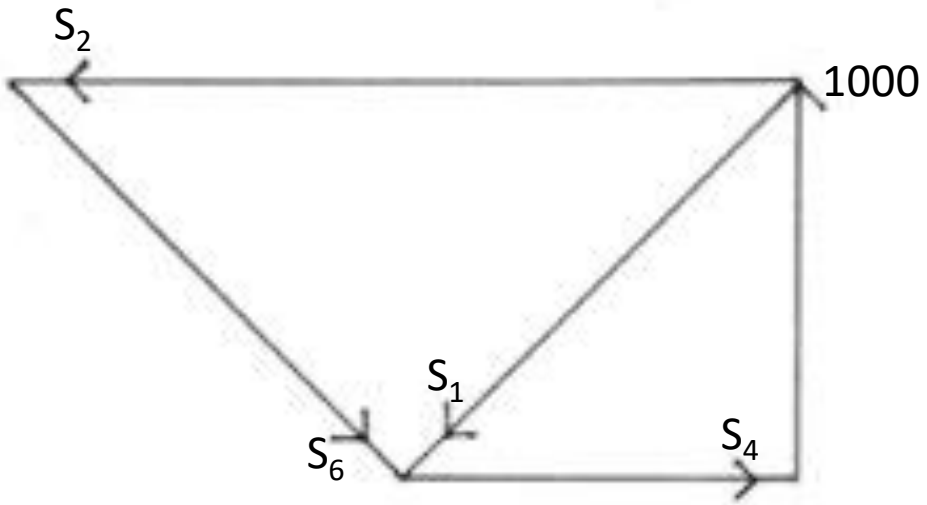
Skala → 200 kg = 1 cm
S_1 = - 2140 kg (tekan)
S_5 = 1500 kg (tarik)
S_9 = 1000 kg (tarik)
S_6 = 1500 kg (tarik)
S_2 = - 1430 kg (tekan)
S_{10} = 700 kg (tekan)
S_3 = - 1430 kg (tekan)
S_{11} = 2040 kg (tarik)

8.2.7 Hitung gaya-gaya batang dengan metode Cremona



α = 45°

RA = RB = 0,5. 2000 = 1000 kg



Skala → 200 kg = 1 cm

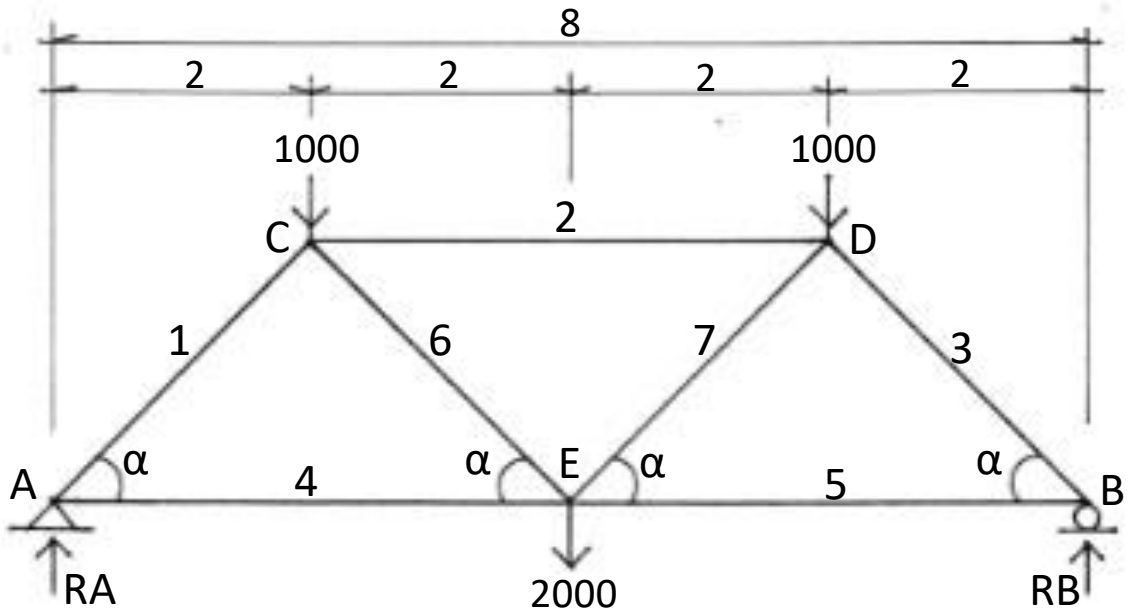
$S_1 = S_3 = 1400$ kg (-)

$S_4 = S_5 = 1000$ kg (+)

$S_2 = 1980$ kg (-)

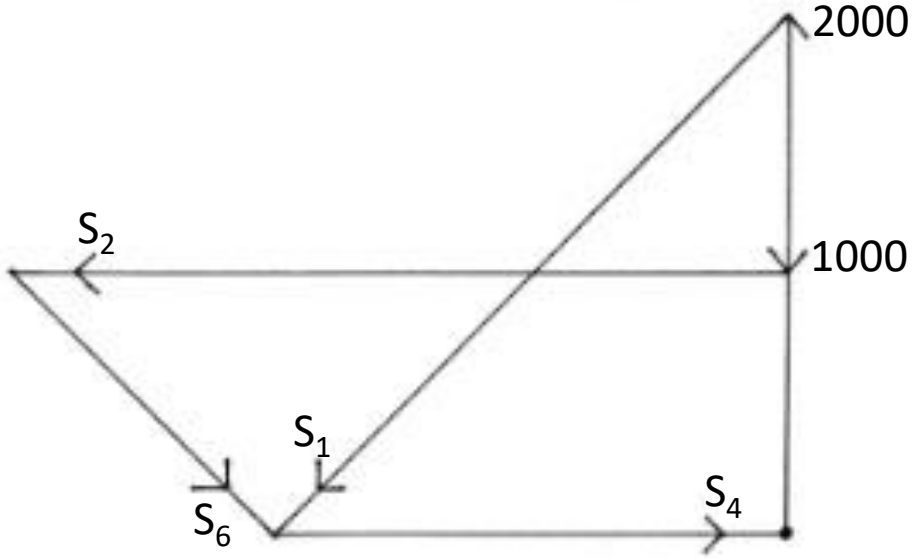
$S_6 = S_7 = 1400$ kg (+)

8.2.8 Hitung gaya-gaya batang dengan metode Cremona



$\alpha = 45^o$

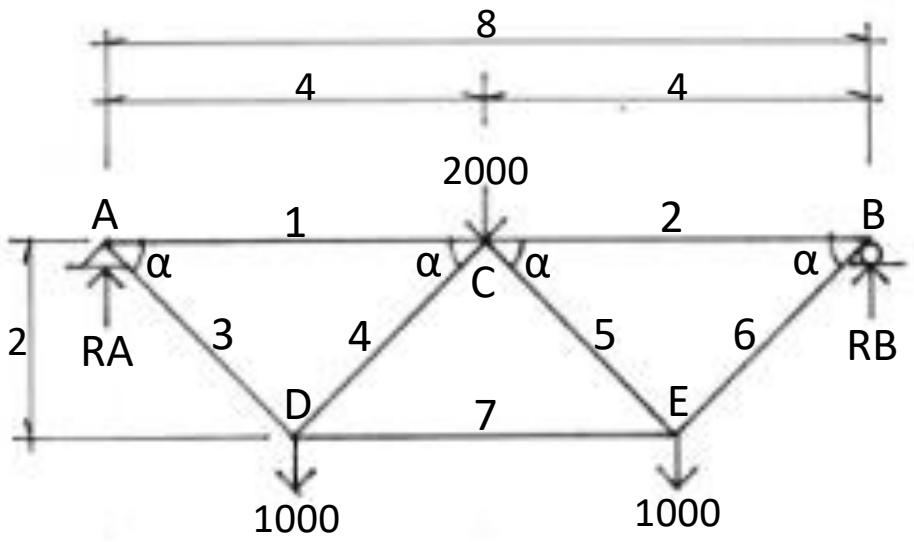
RA = RB = 1000 + 0,5. 2000 = 2000 kg



Skala → 250 kg =- 1 cm

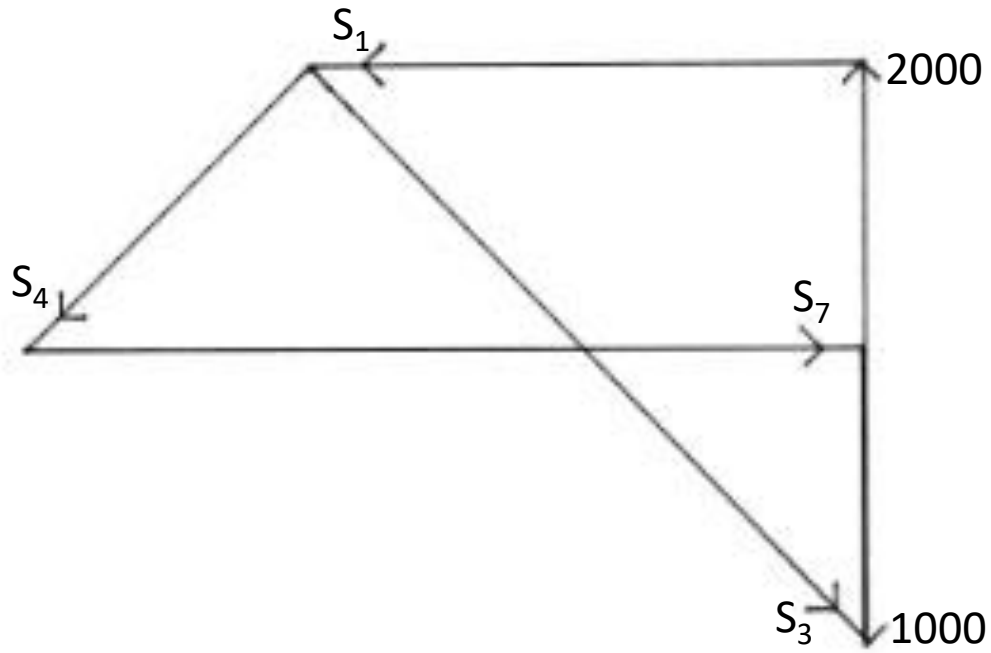
$S_1 = S_3 = 2825$ kg (-)
$S_4 = S_5 = 1975$ kg (+)
$S_2 = 3000$ kg (-)
$S_6 = S_7 = 1325$ kg (+)

8.2.9 Hitung gaya-gaya batang dengan metode Cremona



α = 45°

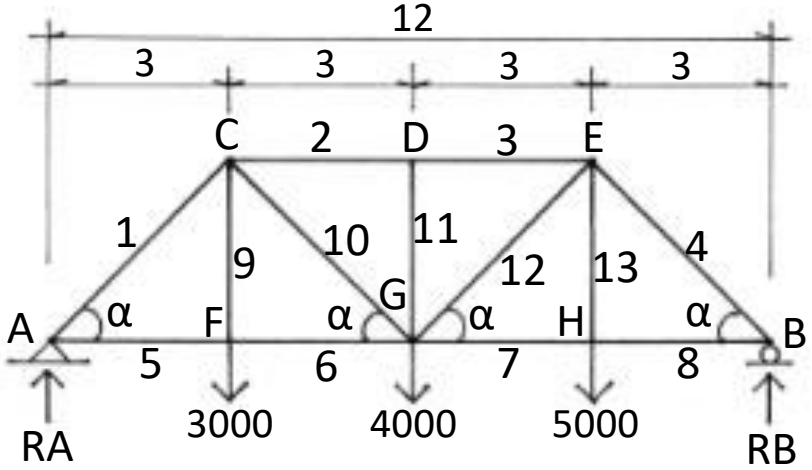
RA = RB = 1000 + 0,5. 2000 = 2000 kg



Skala → 250 kg = 1 cm

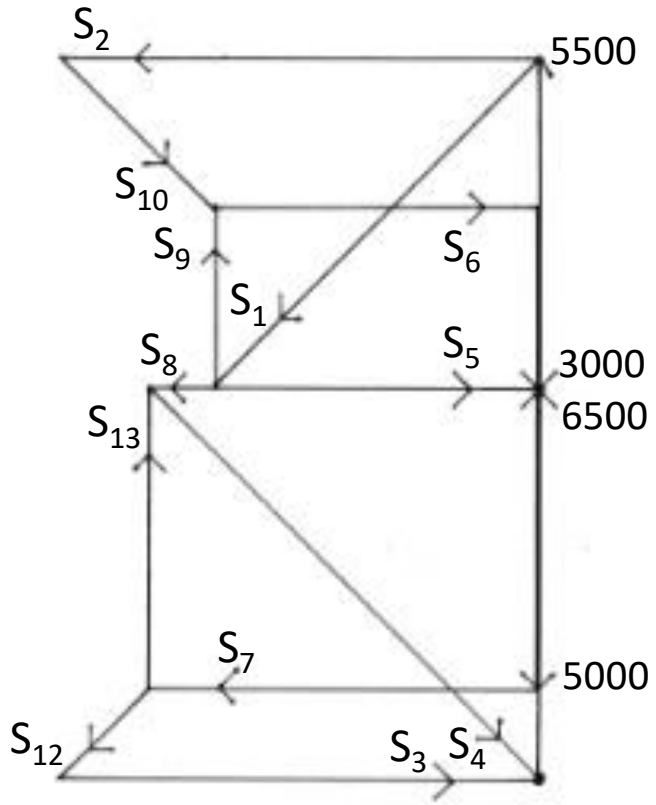
$S_1 = S_2 = 1950$ kg (-)
$S_3 = S_6 = 2775$ kg (+)
$S_4 = S_5 = 1400$ kg (-)
$S_7 = 2925$ kg (+)

8.2.10 Hitung gaya-gaya batang dengan metode Cremona



α = 45°

Setelah dihitung : RA = 5500 kg dan RB = 6500 kg



Skala → 1000 kg = 1 cm

S_1 = 7700 kg (-)

S_5 = 5400 kg (+)

S_9 = 3000 kg (+)

S_6 = 5400 kg (+)

S_2 = 8000 kg (-)

S_{10} = 3600 kg (+)

S_8 = 6500 kg (+)

S_4 = 9200 kg (-)

S_7 = 6500 kg (+)

S_{13} = 5000 kg (+)

S_{12} = 2100 kg (+)

S_3 = 8000 kg (-)