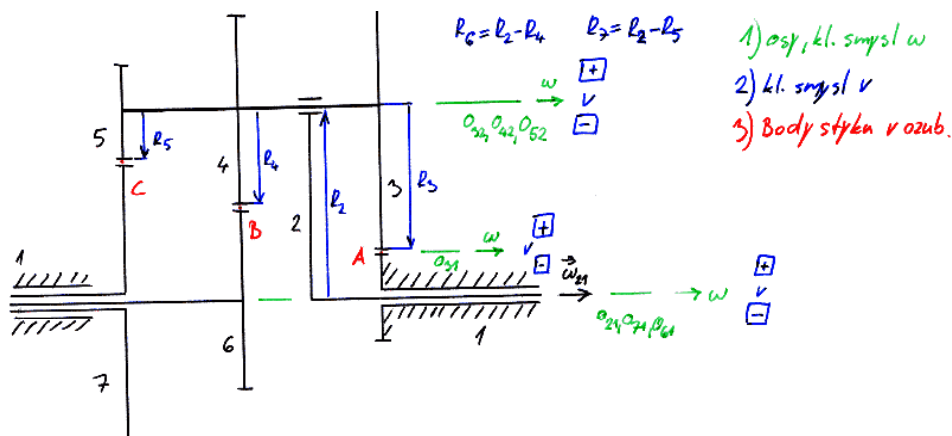


Znáš ω_{21} , urči ω_{61}



4) Rovnice SP

A: $31 = 32 + 21$

B: $41 = 42 + 21$

C: $51 = 52 + 21$

$41 = 46 + 61$

$51 = 56 + 61$

5) Rovnice vektorově

a) $\vec{v}_{31}^A = \vec{v}_{32}^A + \vec{v}_{21}^A$

b) $\vec{\omega}_{32} = \vec{\omega}_{42} = \vec{\omega}_{32}$

c) $\vec{v}_{41}^B = \vec{v}_{46}^B + \vec{v}_{61}^B \Rightarrow \vec{v}_{41}^B = \vec{v}_{61}^B$

$\vec{v}_{61}^B = \vec{v}_{42}^B + \vec{v}_{21}^B$

d) $\vec{v}_{51}^C = \vec{v}_{57}^C + \vec{v}_{71}^C \Rightarrow \vec{v}_{51}^C = \vec{v}_{71}^C$

$\vec{v}_{71}^C = \vec{v}_{52}^C + \vec{v}_{21}^C$

A) $\vec{v}_{21}^C = -\vec{v}_{52}^C + \vec{v}_{21}^C$

$\omega_{21}(r_2 - r_5) = -\omega_{52}r_5 + \omega_{21}(r_2 - r_5)$

$\omega_{21} = \omega_{21} \frac{r_2(r_3 - r_5)}{r_5(r_2 - r_5)}$

6) Rovnice - řešení

a) $0 = -v_{32}^A + v_{21}^A$

$0 = -\omega_{32} \cdot r_3 + \omega_{21}(r_2 - r_3)$

$\omega_{32} = \omega_{21} \left(\frac{r_2}{r_3} - 1 \right)$

b) $\omega_{52} = \omega_{42} = \omega_{32} = \omega_{21} \left(\frac{r_2}{r_3} - 1 \right)$

c) $\vec{v}_{61}^B = -\vec{v}_{42}^B + \vec{v}_{21}^B$

$\omega_{61}(r_2 - r_4) = -\omega_{42}r_4 + \omega_{21}(r_2 - r_4)$

$\omega_{61} = -\omega_{21} \left(\frac{r_4}{r_3} - 1 \right) \frac{r_4}{r_2 - r_4} + \omega_{21}$

$\omega_{61} = -\omega_{21} \frac{r_2 - r_3}{r_3} \frac{r_4}{r_2 - r_4} + \omega_{21}$

$\omega_{61} = -\omega_{21} \left(\frac{r_4(r_2 - r_3)}{r_3(r_2 - r_4)} - 1 \right) = -\omega_{21} \left(\frac{r_2 r_4 - r_3 r_4 - r_2 r_3 + r_3 r_3}{r_3(r_2 - r_4)} \right)$

$\omega_{61} = \omega_{21} \frac{r_2(r_3 - r_4)}{r_3(r_2 - r_4)}$