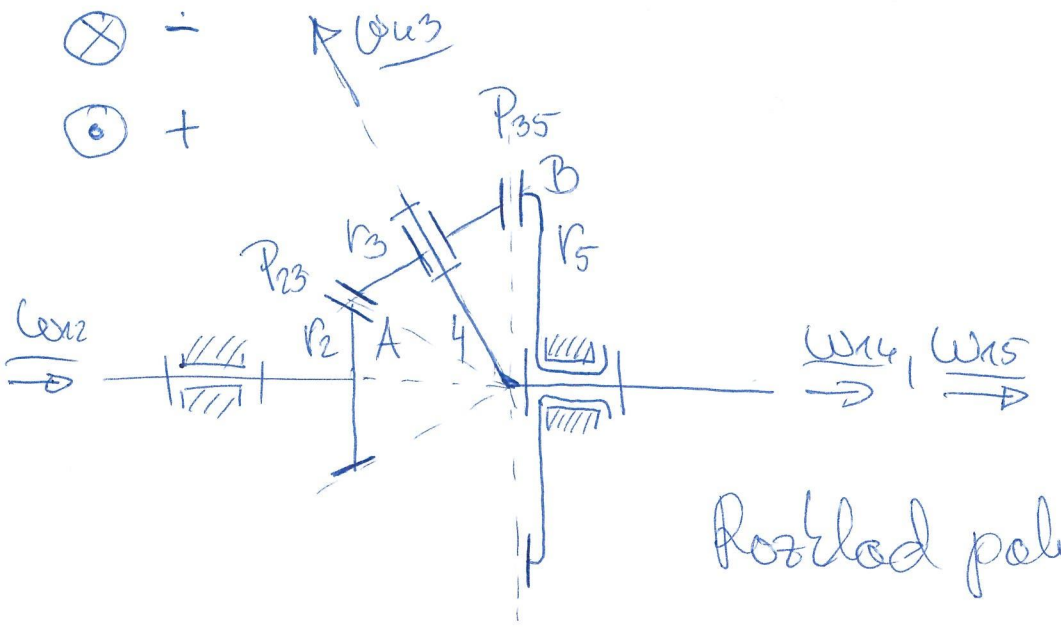
Převodový diferenciál



2 ... centrální kolo

3 ... satelit

4 ... unašeč

5 ... korunové kolo

Rozklad pohybu

$13 = 12 + 23$

$13 = 14 + 43$

$13 = 15 + 53$

Pól A: $13 = 12 + 23$

(P_{23}) $v_{13} = v_{12} + v_{23}$

$\Downarrow$

$\emptyset$

$v_{13} = v_{12}$

rozklad $13 = 14 + 43$

A: $\omega_{12} \cdot r_2 = \omega_{14} \cdot r_2 + \omega_{43} r_3$

Pól B: $13 = 15 + 53$

(P_{35}) $v_{13} = v_{15} + v_{53}$

$\Downarrow$

$\emptyset$

$v_{13} = v_{15}$

B: $\omega_{15} \cdot r_5 = \omega_{14} r_5 - \omega_{43} \cdot r_3$

$-\omega_{43} \cdot r_3 = \omega_{15} r_5 - \omega_{14} r_5$

$\Rightarrow \omega_{12} \cdot r_2 = \omega_{14} \cdot r_2 - \omega_{15} r_5 + \omega_{14} r_5 = \omega_{14}(r_2 + r_5) - \omega_{15} r_5$

$$\boxed{\omega_{14} = \frac{r_2}{r_2 + r_5} \omega_{12} + \frac{r_5}{r_2 + r_5} \omega_{15}}$$