

Objective

Known values

V, w

$$cot\theta = \frac{Bc}{oc} = \frac{Bc}{b} \qquad cot\phi = \frac{Ac}{oc} = \frac{AB+Bc}{b} = \frac{c}{b} + cot\theta$$

$$V_B = \omega R_B$$
 $R_B = \frac{OC}{SINO} \Rightarrow R_B = \frac{b}{SINO}$
 $V_H = \omega R_H$
 $R_H = \frac{OC}{tano} = \frac{b}{tano}$
 $V_H = \frac{DC}{tano} = \frac{b}{tano}$

$$\frac{V_B}{V_H} = \frac{1}{\frac{5PAG}{SPAG}} \Rightarrow \frac{V_H}{V_B} = \frac{1}{1000}$$

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$$\frac{V_B}{SPAG} \Rightarrow \frac{V_H}{V_B} = \frac{1}{1000}$$

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$$R_{A} = \frac{OC}{SSho} = \frac{b}{SSho} = \frac{b}{SS$$

$$\frac{V_{A}}{V_{G}} = \frac{1}{SINB}$$

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$$\cot \alpha = \frac{FD}{OD} = \frac{FE + ED}{OD} = \frac{1}{0} + \frac{ED}{0}$$

$$\cot \beta = \frac{ED}{OD} = \frac{ED}{d} \qquad \therefore \cot \alpha = \frac{c}{d} + \cot \beta$$

$$V_F = \omega R_F$$
 $V_E = \omega R_E$ $R_F = \frac{\partial D}{\partial R_R} = \frac{\partial}{\partial R_R}$

$$V_G = \omega R_G$$
 $V_H = \omega R_H$ $R_E = \frac{\partial D}{\partial R_B} = \frac{\partial}{\partial R_B}$

$$R_G = \frac{OD}{tand} = \frac{d}{tand}$$
 $R_H = \frac{OD}{tang} = \frac{d}{tang}$

$$R_{H} = \frac{OD}{tan\beta} = \frac{d}{tan\beta}$$

$$V_F = \frac{\omega d}{s_S u x} \qquad V_E = \frac{s_S u B}{s_S u B} \qquad V_G = \frac{\omega d}{t a u B} \qquad V_H = \frac{\omega d}{t a u B}$$

$$V_{H} = \frac{\omega d}{\tan \beta}$$

$$\frac{V_G}{V_F} = \frac{\cos \alpha}{\frac{1}{S_F^2 n \alpha}} \Rightarrow \frac{V_G}{V_F} = \cos \alpha$$

Then

the

$$CB = \frac{OC}{\tan \theta} = \frac{OD}{\tan \theta}$$

$$\Rightarrow \frac{b}{\tan \theta} = \frac{d}{\tan \theta}$$

$$\Rightarrow \frac{b}{\tan \theta} = \frac{d}{d}$$

$$\Rightarrow \frac{d}{d} = \frac{d}{d}$$

$$\frac{1}{12} = R = \sqrt{\left(\frac{a-b}{2}\right)^2 + \left(\frac{c}{2} + \frac{b}{4ano}\right)^2}$$
Known
Value with $0 \rightarrow Find \emptyset$, α , β

 $V_B = \omega R_B = (\omega . b) \rightarrow A11$ known values so 89nd $V_B + Aen \omega RA$ egns 89nd all semalarly velocities.

Then after gending all censes velocity gend the angular relacity of each wheel by very of each wheel by very of each wheel

d spnx

 $v_H = \frac{\omega d}{\tan B}$