
15.25
$\omega_{0}$
1


$$
\vec{v}_{A}=8.75 \mathrm{im} \cdot 1 \mathrm{k} \rightarrow \overrightarrow{\omega_{A B}}=? \overrightarrow{\omega_{0}}=?
$$

$$
\vec{v}_{A}=\vec{v}_{A D}+\vec{v}_{D}, \vec{v}_{D}=\vec{v}_{E}
$$

$$
\vec{v}_{A}=\vec{v}_{A / D}+\vec{v}_{E}=\vec{v}_{A / D}+\vec{v}_{E / 0}+\vec{v}_{D}
$$

$$
\vec{v}_{A}=\vec{v}_{A / 0}+\vec{v}_{E / 0} \text { for velocities. }
$$

$$
\tan \beta=\frac{7}{24}, \beta=16.2602^{\circ}
$$



$$
\begin{gathered}
\omega_{0}=\square \\
\vec{\omega}_{D E}=4 \mathrm{rad} / 25, \vec{\omega}_{O B}=?
\end{gathered}
$$

Let $C$ be a point of the rod $A B$, where $C$ lies on the vertical line $D E$ at the instant under consideration
We note that $\vec{\omega}_{A B}=\vec{\omega}_{D E}=4 \mathrm{rad} / \mathrm{s} S$. We wite

$$
\vec{v}_{B}=\vec{v}_{B / 0}+\vec{v}_{\alpha}=\vec{v}_{B / 0} \text {, but } \vec{v}_{B}=\vec{v}_{B / C}+\vec{v}_{C}
$$

$\vec{v}_{B / O}=\vec{v}_{B / C}+\vec{v}_{C}$ Linkers eq. for velocities


$$
\left.\begin{array}{c}
+\sum V_{x}: \quad \frac{4}{5}\left(10 \omega_{O B}\right)=0+v_{c} \\
+\uparrow \sum V_{y}: \quad \frac{3}{5}\left(10 \omega_{O B}\right)=9(4)+0
\end{array}\right\} \begin{aligned}
& \omega_{O B}=0 \\
& v_{C}=\square \\
& 6 \omega_{O B}=36, \omega_{O B}=6 \quad \vec{\omega}_{O B}=6 \mathrm{rad} / \mathrm{R} 2 \\
& v_{c}=8 \omega_{O B}=8(6)=48 \quad \vec{v}_{C}=48 \mathrm{im} / \mathrm{R} \leftarrow
\end{aligned}
$$

vote that $v_{s}=6(4)=24 \quad \vec{v}_{S}=24 \mathrm{mi} / h^{\leftarrow}$

