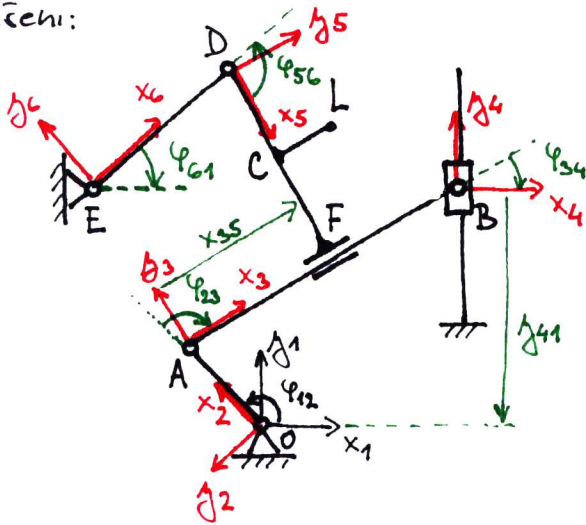


Dáno: rozměry, $\varphi_{12}(t)$

Určit: pohyb mechanismu a bodu L
(maticovou metodou)

Řešení:



$$n = 3(6-1) - 2(5+2) + \emptyset = 15 - 14 = 1^\circ \text{ volnosti}$$

$$l = 7 + \emptyset - 6 + 1 = 2 \text{ nezávislé smyčky}$$

nezávislá souřadnice: $\varphi_{12}(t)$

1. smyčka: $\underline{T}_{12} \underline{T}_{23} \underline{T}_{34} \underline{T}_{41} = \underline{E}_3$

$$\underline{T}_\varphi(\varphi_{12}) \underline{T}_x(OA) \underline{T}_\varphi(-\varphi_{23}) \underline{T}_x(AB) \underline{T}_\varphi(-\varphi_{34}) \underline{T}_y(-y_{41}) \underline{T}_x(-c) = \underline{E}_3$$

2. smyčka: $\underline{T}_{12} \underline{T}_{23} \underline{T}_{35} \underline{T}_{56} \underline{T}_{61} = \underline{E}_3$

$$\underline{T}_\varphi(\varphi_{12}) \underline{T}_x(OA) \underline{T}_\varphi(-\varphi_{23}) \underline{T}_x(x_{35}) \underline{T}_\varphi(-\frac{\pi}{2}) \underline{T}_x(-DF) \underline{T}_\varphi(\varphi_{56}) \underline{T}_x(-DE) \underline{T}_\varphi(-\varphi_{61}) \underline{T}_y(-a) \underline{T}_x(b) = \underline{E}_3$$

2 smyčky \rightarrow 6 nezávislých rovnic pro 6 závislých souřadnic:

$$[\varphi_{23}, \varphi_{34}, x_{35}, y_{41}, \varphi_{56}, \varphi_{61}]$$

Bod L: $\underline{v}_{1L} = \underline{T}_{15} \underline{v}_{5L}$

$$\underline{v}_{1L} = \underline{T}_x(-b) \underline{T}_y(a) \underline{T}_\varphi(\varphi_{61}) \underline{T}_x(ED) \underline{T}_\varphi(-\varphi_{56}) \begin{bmatrix} CD \\ CL \\ 1 \end{bmatrix}$$

nebo $\underline{v}_{1L} = \underline{T}_\varphi(\varphi_{12}) \underline{T}_x(OA) \underline{T}_\varphi(-\varphi_{23}) \underline{T}_x(x_{35}) \underline{T}_\varphi(-\frac{\pi}{2}) \underline{T}_x(-DF) \begin{bmatrix} CD \\ CL \\ 1 \end{bmatrix}$