

$$5.5 \quad \vec{\alpha} = 12\pi^2 \vec{e}_\eta, \alpha = 118,44 \text{ rad/s}^2, \\ \vec{v}_A = 0,125\pi(-4\vec{i} + 6\vec{e}_\eta - 3\vec{e}_\zeta), \\ \vec{a}_A = -0,125\pi^2(25\vec{e}_\eta + 18\vec{e}_\zeta), \\ v_A = 3067 \text{ m/s}, a_A = 38 \text{ m/s}^2$$

$$5.6 \quad \omega = 30 \text{ rad/s}, v_P = 3,606 \text{ m/s}, \\ R = 0,1202 \text{ m}, a_P = 108,2 \text{ m/s}^2$$

$$5.7 \quad \vec{a} = -142,5\vec{i} + 136\vec{j} + 78,55\vec{k}, \\ a = 212,06 \text{ m/s}^2$$

$$5.8 \quad \vec{a} = -\left(\frac{2\pi}{t}\right)^2 \frac{R}{r} \vec{i}$$

## 6 Kinematika složenog gibanja

$$6.1 \quad \vec{v}_{AB} = 19,62\vec{i} - 13,02\vec{j}, v, \text{ m/s}, \\ \vec{a}_{AB} = 1,5\vec{i} + 2,598\vec{j}, a, \text{ m/s}^2$$

$$6.2 \quad \omega_{AB} = 1,333 \text{ rad/s}, \\ \alpha_{AB} = -6,735 \text{ rad/s}^2, \\ v_B = 12,76 \text{ m/s}, a_B = 27,1 \text{ m/s}^2$$

$$6.3 \quad v_D = 0,5 \text{ m/s}, a_D = -1,12 \text{ m/s}^2$$

$$6.4 \quad v_B = 10,9 \text{ m/s}, a_B = 246 \text{ m/s}^2$$

$$6.5 \quad v_A = 5,8 \text{ m/s}, a_A = 86 \text{ m/s}^2$$

$$6.6 \quad v_D = 7 \text{ m/s}, a_D = 120 \text{ m/s}^2, \\ \omega_{AB} = 12,83 \text{ rad/s}, \alpha_{AB} = -377 \text{ rad/s}^2$$

$$6.7 \quad v_A = 0,595 \text{ m/s}, a_A = 3 \text{ m/s}^2, \\ \alpha_{OB} = -12,33 \text{ rad/s}^2$$

$$6.8 \quad \omega_{AC} = 9,2 \text{ rad/s}, \alpha_{AC} = -405 \text{ rad/s}^2$$

$$6.9 \quad v_B = 3,15 \text{ cm/s}, a_B = 67,5 \text{ cm/s}^2, \\ \omega_{AB} = 0,391 \text{ rad/s}$$

$$6.10 \quad v_{\text{rel}} = 3,575 \text{ m/s}, \omega_{AB} = 17,86 \text{ rad/s}, \\ \alpha_{AB} = -1518 \text{ rad/s}^2$$

$$6.11 \quad a_B = 0,6012 \text{ m/s}^2, v_B = 0,479 \text{ m/s}$$

$$6.12 \quad v_C = 2,65 \text{ m/s}, a_C = 20,7 \text{ m/s}^2$$

$$6.13 \quad v_A = 2,504 \text{ m/s}, a_A = 3,92 \text{ m/s}^2, \\ v_D = 1,12 \text{ m/s}, a_D = 2,45 \text{ m/s}^2$$

$$6.14 \quad \omega_{OB} = 10 \text{ rad/s}, a_A = 141 \text{ m/s}^2$$

$$6.15 \quad v_D = 8,2 \text{ m/s}, a_D = 42 \text{ m/s}^2$$

$$6.16 \quad \omega = 5,87 \text{ rad/s}, \alpha = -15,3 \text{ rad/s}^2$$

$$6.17 \quad \omega = 4,6 \text{ rad/s}, \alpha = 29,2 \text{ rad/s}^2$$

$$6.18 \quad \omega_{OC} = 7,5 \text{ rad/s}, \alpha_{OC} = -110 \text{ rad/s}^2$$

$$6.19 \quad v_C = 2,053 \text{ m/s}, a_C = 9,83 \text{ m/s}^2$$

$$6.20 \quad \omega_{(\varphi=20^\circ)} = 8,87 \text{ rad/s}, \\ \alpha_{(\varphi=20^\circ)} = 204 \text{ rad/s}^2, \\ \omega_{(\varphi=0^\circ)} = 12,57 \text{ rad/s}, \\ \alpha_{(\varphi=0^\circ)} = 0$$

$$6.21 \quad v_A = 2,31 \text{ m/s}, a_A = 24,63 \text{ m/s}^2$$

$$6.22 \quad \omega_{AB} = 0,097 \text{ rad/s (sup. smj. k. s.)}, \\ \omega_Z = 1,452 \text{ rad/s (u smj. k. s.)}$$

$$6.23 \quad v_A = 3,644 \text{ m/s}, a_A = 9,021 \text{ m/s}^2$$

$$6.24 \quad v_D = 6,025 \text{ m/s}, a_D = 12,379 \text{ m/s}^2$$

$$6.25 \quad v_D = 1,916 \text{ m/s}, \\ \text{translatorno gibanje ručice AD}$$

$$6.26 \quad v_B = 2,35 \text{ m/s}, a_B = 2,02 \text{ m/s}^2$$