NUMERIČKA RJEŠENJA ZADATAKA

2 REDUKCIJA SKUPA SILA

2.1 $F_{\text{R}x} = 172{,}4$ N, $F_{\text{R}y} = 281{,}1$ N, $F_{\text{R}z} = 291{,}3$ N, $F_{\text{R}} \approx 440$ N, $\alpha = 66{,}93°$,

       $\beta = 50{,}29°$, $\gamma = 48{,}55°$, $M_x = -133{,}2$ N·m, $M_y = 83{,}18$ N·m, $M_z = -7{,}3$ N·m,

       $M_{\text{O}} = 157{,}2$ N·m, $\varphi = 147{,}92°$, $\psi = 58{,}06°$, $\vartheta = 92{,}66°$, $\delta = 91{,}42°$ ($\angle\, \vec{F}_{\text{R}}, \vec{M}_{\text{O}}$).

2.2 $F_{\text{R}} = 11{,}18$ N, $M_{\text{A}} = -22$ N·cm.

2.3 $F_{\text{R}x} = -2{,}243$ kN, $F_{\text{R}y} = 1{,}414$ kN, $F_{\text{R}} = 2{,}65$ kN, $M_{\text{A}} = -7{,}7$ kN·m.

2.4 $F_{\text{R}x} = -0{,}84$ kN, $F_{\text{R}y} = -2{,}12$ kN, $F_{\text{R}} = 2{,}28$ kN, $M_{\text{A}} = -4{,}68$ kN·m.

2.5 $F_{\text{R}x} = -180$ N, $F_{\text{R}y} = 90$ N, $F_{\text{R}} = 201{,}25$ N, $\alpha_{\text{R}} = 153{,}43°$, $M_{\text{A}} = -10$ N·m.

2.6 $F_{\text{R}x} = -30{,}62$ kN, $F_{\text{R}y} = -30$ kN, $F_{\text{R}z} = 27{,}43$ kN, $F_{\text{R}} = 50{,}89$ kN, $M_x = -6{,}11$ kN·m,
     $M_y = 3{,}12$ kN·m, $M_z = -13{,}75$ kN·m, $M_{\text{O}} = 15{,}36$ kN·m.

4 UVJETI RAVNOTEŽE TIJELA

4.1 $S_1 = 3$ kN, $S_2 = -5$ kN, $S_3 = -4{,}24$ kN, $S_4 = -1$ kN, $S_5 = 4$ kN, $S_6 = -5{,}83$ kN.

4.2 $S_1 = -5$ kN, $S_2 = 2$ kN, $S_3 = -3{,}61$ kN, $S_4 = 0$, $S_5 = 4$ kN, $S_6 = -5{,}39$ kN.

4.3 $F_{\text{A}x} = 194{,}8$ N, $F_{\text{A}y} = 237{,}55$ N, $F_{\text{A}} = 307{,}2$ N, $F_{\text{B}x} = 5{,}23$ N, $F_{\text{B}y} = 22{,}25$ N,
     $F_{\text{B}z} = 496{,}4$ N, $F_{\text{B}} = 496{,}9$ N.

4.4 $F_{\text{A}x} = 400$ N, $F_{\text{A}z} = -50$ N, $F_{\text{A}} = 403{,}1$ N, $F_{\text{B}x} = 0$, $F_{\text{B}y} = 400$ N, $F_{\text{B}z} = 0$,
     $F_{\text{S}} = 640$ N.

4.5 $S_1 = 195$ N, $S_2 = 137{,}5$ N, $F_{\text{A}x} = 0$, $F_{\text{A}y} = 300$ N, $F_{\text{A}z} = 75$ N, $F_{\text{A}} = 309{,}2$ N.

4.6 $F_{\text{S}} = 1340$ N, $F_{\text{A}x} = -870{,}33$ N, $F_{\text{A}z} = 670$ N, $F_{\text{A}} = 1098{,}35$ N, $F_{\text{B}z} = 0$,
     $F_{\text{B}x} = 2030{,}77$ N $= F_{\text{B}}$.

4.7 $S_1 = 1236{,}9$ N, $S_2 = 0$, $S_3 = -540{,}8$ N,
     $F_{\text{A}x} = 600$ N, $F_{\text{A}y} = 450$ N, $F_{\text{A}z} = 0$, $F_{\text{A}} = 750$ N.

4.8 $S_{\text{CD}} = 544{,}7$ N, $F_{\text{S}} = 143{,}75$ N, $F_{\text{A}x} = -116{,}04$ N, $F_{\text{A}y} = 587{,}1$ N, $F_{\text{A}z} = 36{,}6$ N,
     $F_{\text{A}} = 599{,}6$ N.

4.9 $S_1 = 0{,}75$ kN, $S_2 = 0{,}375$ kN, $F_{\text{A}x} = -0{,}47$ kN, $F_{\text{A}y} = 8$ kN, $F_{\text{A}z} = 1{,}833$ kN,
     $F_{\text{B}x} = -2{,}156$ kN, $F_{\text{B}z} = 1{,}167$ kN, $F_{\text{A}} = 8{,}22$ kN, $F_{\text{B}} = 2{,}45$ kN.

4.10 $S_1 = 326{,}67$ N, $S_2 = 105$ N,
     $F_{\text{A}x} = -23{,}33$ N, $F_{\text{A}y} = 350$ N, $F_{\text{A}z} = 105$ N, $F_{\text{A}} = 366{,}15$ N.

4.11 $S = -500$ N, $F_{\text{A}x} = 0$, $F_{\text{A}y} = -371{,}3$ N, $F_{\text{A}z} = 0$, $F_{\text{A}} = 371{,}3$ N,
     $F_{\text{B}x} = -222{,}8$ N, $F_{\text{B}z} = 250$ N, $F_{\text{B}} = 334{,}9$ N.