


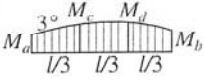



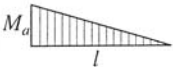



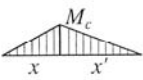
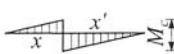

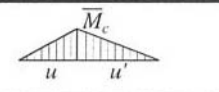
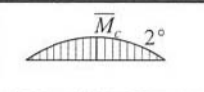
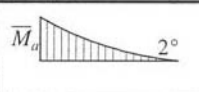

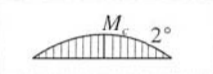






Tab. 14.3: Hodnoty integrálů $\int M\bar{M}dx$ u prutů konstantního průřezu

Zatěž. případ	M	\bar{M}_a	\bar{M}_a	\bar{M}_b
1		$\frac{1}{2} M_a \bar{M}_a l$	$\frac{1}{3} \bar{M}_a M_a l$	$\frac{1}{6} M_a (2\bar{M}_a + \bar{M}_b) l$
2		$\frac{1}{2} \bar{M}_a M_b l$	$\frac{1}{6} \bar{M}_a M_b l$	$\frac{1}{6} M_b (\bar{M}_a + 2\bar{M}_b) l$
3		$\frac{1}{2} (M_a + M_b) \bar{M}_a l$	$\frac{1}{6} (2M_a + M_b) \bar{M}_a l$	$\frac{1}{6} [\bar{M}_a (2M_a + M_b) + \bar{M}_b (M_a + 2M_b)] l$
4		$\frac{1}{2} (M_a - M_b) \bar{M}_a l$	$\frac{1}{6} (2M_a - M_b) \bar{M}_a l$	$\frac{1}{6} [\bar{M}_a (2M_a - M_b) + \bar{M}_b (M_a - 2M_b)] l$
5		$\frac{1}{2} \bar{M}_a M_c l$	$\frac{1}{6} \bar{M}_a M_c (l + x')$	$\frac{1}{6} [\bar{M}_a (l + x') + \bar{M}_b (l + x)] M_c$
6		$\frac{1}{2} M_a M_c (x - x')$	$\frac{1}{6l} \bar{M}_a M_c (l^2 - 3x'^2)$	$\frac{M_c}{6l} [\bar{M}_b (3x'^2 - l^2) - \bar{M}_a (3x'^2 - l^2)]$
7		$M_a \bar{M}_a l$	$\frac{1}{2} \bar{M}_a M_a l$	$\frac{1}{2} (\bar{M}_a + \bar{M}_b) M_a l$
8		$\frac{2}{3} \bar{M}_a M_c l$	$\frac{1}{3} \bar{M}_a M_c l$	$\frac{1}{3} M_c (\bar{M}_a + \bar{M}_b) l$
9		$\frac{1}{3} \bar{M}_a M_a l$	$\frac{1}{4} \bar{M}_a M_a l$	$\frac{1}{12} M_a (3\bar{M}_a + \bar{M}_b) l$
10		$\frac{1}{3} \bar{M}_a M_b l$	$\frac{1}{12} \bar{M}_a M_b l$	$\frac{1}{12} M_b (\bar{M}_a + 3\bar{M}_b) l$
11		$\frac{2}{3} \bar{M}_a M_a l$	$\frac{5}{12} \bar{M}_a M_a l$	$\frac{1}{12} M_a (5\bar{M}_a + 3\bar{M}_b) l$
12		$\frac{2}{3} \bar{M}_a M_b l$	$\frac{1}{4} \bar{M}_a M_b l$	$\frac{1}{12} M_b (3\bar{M}_a + 5\bar{M}_b) l$
13		$\frac{1}{2} \bar{M}_a M_a x$	$\frac{1}{6} \bar{M}_a M_a \frac{x}{l} (3l - x)$	$\frac{M_a}{6} \cdot \frac{x}{l} [\bar{M}_a (3l - x) + \bar{M}_b x]$
14		$\frac{1}{2} \bar{M}_a M_b x'$	$\frac{1}{6} \bar{M}_a M_b \frac{x'^2}{l}$	$\frac{M_b}{6} \cdot \frac{x'}{l} [\bar{M}_b (3l - x') + \bar{M}_a x']$
15		$\frac{1}{4} \bar{M}_a M_b l$	$\frac{1}{20} \bar{M}_a M_b l$	$\frac{M_b}{20} (\bar{M}_a + 4\bar{M}_b) l$
16		$\frac{1}{4} \bar{M}_a M_a l$	$\frac{1}{5} \bar{M}_a M_a l$	$\frac{M_a}{20} (4\bar{M}_a + \bar{M}_b) l$

Zatěž. případ	M	\bar{M}			
17		$\frac{\bar{M}_a}{8}(M_a + 3M_c + 3M_d + M_b)l$	$\frac{\bar{M}_a}{120}(13M_a + 36M_c + 9M_d + 2M_b)l$	$\frac{l}{120}[\bar{M}_a \cdot (13M_a + 36M_c + 9M_d + 2M_b) + \bar{M}_b \cdot (2M_a + 9M_c + 36M_d + 13M_b)]$	
Zatěž. případ	M	\bar{M}			
18		$\frac{1}{6}\bar{M}_c M_a(l+u')$	$\frac{1}{3}\bar{M}_c M_a l$	$\frac{1}{4}\bar{M}_a M_a l$	
19		$\frac{1}{6}\bar{M}_c M_b(l+u)$	$\frac{1}{3}\bar{M}_c M_b l$	$\frac{1}{12}\bar{M}_a M_b l$	
20		$\frac{\bar{M}_c}{6}[M_a(l+u') + M_b(l+u)]$	$\frac{1}{3}\bar{M}_c(M_a + M_b)l$	$\frac{1}{12}\bar{M}_a(3M_a + M_b)l$	
21		$\frac{\bar{M}_c}{6}[M_a(l+u') - M_b(l+u)]$	$\frac{1}{3}\bar{M}_c(M_a - M_b)l$	$\frac{1}{12}\bar{M}_a(3M_a - M_b)l$	
22		$\frac{\bar{M}_c M_c l}{6ux'} \cdot [2ux' - (x' - u)^2]$ pro $x < u$; $\frac{\bar{M}_c M_c l}{6u'x} \cdot [2u'x - (u' - x)^2]$ pro $x > u$	$\frac{\bar{M}_c M_c}{3l}(l^2 + xx')$	$\frac{\bar{M}_a M_c}{12l}(3lx' + x^2)$	
23		$\frac{\bar{M}_c M_c}{6}\left(l + u - \frac{3x'^2}{u'}\right)$ pro $x > u$; $\frac{-\bar{M}_c M_c}{6}\left(l + u' - \frac{3x^2}{u}\right)$ pro $x < u$	$-\frac{\bar{M}_c M_c}{3l} \cdot (l^3 - 6lx^2 + 4x^3)$	$\frac{\bar{M}_a M_c}{12l^2}(l^3 - 4x'^3)$	

Zatěž. případ	 \bar{M}	 \bar{M}_c	 \bar{M}_c 2°	 \bar{M}_a 2°
24	 M_a	$\frac{1}{2} \bar{M}_c M_a l$	$\frac{2}{3} \bar{M}_c M_a l$	$\frac{1}{3} \bar{M}_a M_a l$
25	 M_c 2°	$\frac{\bar{M}_c M_c}{3l} (l^2 + uul)$	$\frac{8}{15} \bar{M}_c M_c l$	$\frac{1}{5} \bar{M}_a M_c l$
26	 M_a 2°	$\frac{\bar{M}_c M_a}{12l} (3lu + u^2)$	$\frac{1}{5} \bar{M}_c M_a l$	$\frac{1}{5} \bar{M}_a M_a l$
27	 2° M_b	$\frac{\bar{M}_c M_b}{12l} (3lu + u^2)$	$\frac{1}{5} \bar{M}_c M_b l$	$\frac{1}{30} \bar{M}_a M_b l$
28	 M_a 2°	$\frac{\bar{M}_c M_a}{12l} (5l^2 - ul - u^2)$	$\frac{7}{15} \bar{M}_c M_a l$	$\frac{3}{10} \bar{M}_a M_a l$
29	 2° M_b	$\frac{\bar{M}_c M_b}{12l} (5l^2 - ul - u^2)$	$\frac{7}{15} \bar{M}_c M_b l$	$\frac{2}{15} \bar{M}_a M_b l$