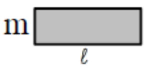
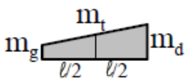
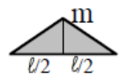
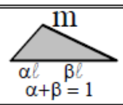
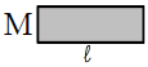
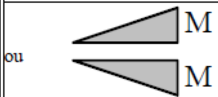
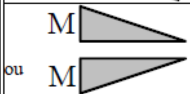
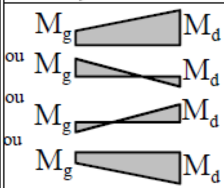
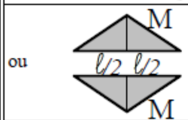
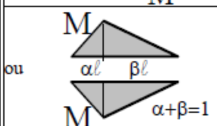
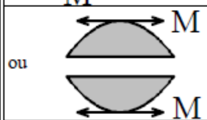
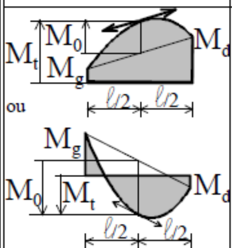
Annexe

Intégrales de MOHR : $\frac{1}{\ell}\int_0^\ell M(x)m(x)dx$

à multiplier par $\frac{\ell}{EI}$ pour M_f, $\frac{\ell}{EA}$ pour N, ou $\frac{\ell}{GA_r}$ pour V.

ℓ = longueur du tronçon d'intégration.

M(x) \ m(x)						
	Mm	$\frac{1}{2}Mm$	$\frac{1}{2}Mm$	$\frac{1}{2}M(m_g + m_d)$	$\frac{1}{2}Mm$	$\frac{1}{2}Mm$
	$\frac{1}{2}Mm$	$\frac{1}{3}Mm$	$\frac{1}{6}Mm$	$\frac{1}{6}M(m_g + 2m_d)$	$\frac{1}{4}Mm$	$\frac{1}{6}Mm(1 + \alpha)$
	$\frac{1}{2}Mm$	$\frac{1}{6}Mm$	$\frac{1}{3}Mm$	$\frac{1}{6}M(2m_g + m_d)$	$\frac{1}{4}Mm$	$\frac{1}{6}Mm(1 + \beta)$
	$\frac{m}{2}(M_g+M_d)$	$\frac{m}{6}(M_g+2M_d)$	$\frac{m}{6}(2M_g+M_d)$	$\frac{1}{6}(2M_g m_g + 2M_d m_d + M_g m_d + M_d m_g)$	$\frac{m}{4}(M_g + M_d)$	$\frac{1}{6}m\,[M_d(1 + \beta) + M_g(1 + \alpha)]$
	$\frac{1}{2}Mm$	$\frac{1}{4}Mm$	$\frac{1}{4}Mm$	$\frac{1}{4}M(m_g + m_d)$	$\frac{1}{3}Mm$	$\frac{1}{12}Mm\,(3 - 4\alpha^2)/\beta$
	$\frac{1}{2}Mm$	$\frac{1}{6}Mm(1+\alpha)$	$\frac{1}{6}Mm(1+\beta)$	$\frac{1}{6}M[m_g(1 + \beta) + m_d(1 + \alpha)]$	$\frac{1}{12}Mm\,(3 - 4\alpha^2)/\beta$	$\frac{1}{3}Mm$
	$\frac{2}{3}Mm$	$\frac{1}{3}Mm$	$\frac{1}{3}Mm$	$\frac{1}{3}M(m_g + m_d)$	$\frac{5}{12}Mm$	$\frac{1}{3}Mm\,(1 + \alpha\beta)$
	$\frac{2}{3}Mm$	$\frac{1}{4}Mm$	$\frac{5}{12}Mm$	$\frac{1}{12}M(5m_g + 3m_d)$	$\frac{17}{48}Mm$	$\frac{1}{12}Mm\,(5 - \alpha - \alpha^2)$
	$\frac{2}{3}Mm$	$\frac{5}{12}Mm$	$\frac{1}{4}Mm$	$\frac{1}{12}M(3m_g + 5m_d)$	$\frac{17}{48}Mm$	$\frac{1}{12}Mm\,(5 - \beta - \beta^2)$
	$\frac{1}{3}Mm$	$\frac{1}{12}Mm$	$\frac{1}{4}Mm$	$\frac{1}{12}M(3m_g + m_d)$	$\frac{7}{48}Mm$	$\frac{1}{12}Mm\,(1 + \beta + \beta^2)$
	$\frac{1}{3}Mm$	$\frac{1}{4}Mm$	$\frac{5}{12}Mm$	$\frac{1}{12}M(m_g + 3m_d)$	$\frac{7}{48}Mm$	$\frac{1}{12}Mm\,(1 + \alpha + \alpha^2)$
 $M_t = M_0 + \frac{M_g + M_d}{2}$	$\frac{1}{6}m(3M_g + 3M_d + 4M_0)$ ou $\frac{m}{6}(M_g + M_d + 4M_t)$	$\frac{1}{6}m(M_g + 2M_d + 2M_0)$ ou $\frac{m}{6}(M_d+2M_t)$	$\frac{1}{6}m(2M_g + M_d + 2M_0)$ ou $\frac{m}{6}(Mg+2M_t)$	$\frac{m_g}{6}(2M_g+M_d+2M_0) + \frac{m_d}{6}(M_g+2M_d+2M_0)$ ou $\frac{1}{6}(M_g m_g+M_d m_d+4M_t m_t)$	$\frac{1}{4}m(M_g + M_d + \frac{5}{3}M_0)$ ou $\frac{m}{24}(M_g + M_d + 10M_t)$	$\frac{1}{6}m\,[M_g(1 + \beta) + M_d(1 + \alpha) + 2\,M_0\,(1 + \alpha\beta)]$

Nota : m, m_g, m_d, m_t, M, M_g, M_d, M_t et M_0 sont à prendre en valeur algébrique (avec leur signe).
M_0 est le moment fléchissant maxi du tronçon iso sur 2 appuis simple ($M_0 = \pm p\ell^2/8$)