

$$camber = piecewise\left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x)\right)$$

$$camber = \begin{cases} 0.01175224613 - 0.01175224613 x & 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x & x \leq 0.5 \end{cases} \quad (1)$$

$$k := 361.4 \quad 361.4 \quad (2)$$

$$m := .058 \quad 0.058 \quad (3)$$

$$thickness = piecewise\left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x)\right)$$

$$+ \frac{t}{2} (.2969 \cdot \text{sqrt}(x) - .126 x - .3516 x^2 + .2843 x^3 - .1015 x^4)$$

$$thickness = \begin{cases} 0.01175224613 - 0.01175224613 x & 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x & x \leq 0.5 \end{cases} \quad (4)$$

$$+ 0.2226750000 \sqrt{x} - 0.09450000000 x - 0.2637000000 x^2$$

$$+ 0.2132250000 x^3 - 0.07612500000 x^4$$

$$t := .15 \quad 0.15 \quad (5)$$

$$xcoord = x - piecewise\left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x)\right)$$

$$+ \frac{t}{2} (.2969 \cdot \text{sqrt}(x) - .126 x - .3516 x^2$$

$$+ .2843 x^3 - .1015 x^4) \sin\left(\arctan\left(\frac{d\left(piecewise\left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x)\right)\right)}{dx}\right)\right)$$

$$xcoord = x - \begin{cases} 0.01175224613 - 0.01175224613 x & 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x & x \leq 0.5 \end{cases} \quad (6)$$

$$+ \frac{1}{dx \sqrt{1 + \frac{d\left(\begin{cases} 0.01175224613 - 0.01175224613 x & 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x & x \leq 0.5 \end{cases}\right)^2}{dx^2}}}$$

$$0.7500000000 (.2969 \sqrt{x} - 0.126 x - 0.3516 x^2$$

$$\begin{aligned}
& + 0.2843 x^3 - 0.1015 x^4) d \left(\begin{array}{l} 0.01175224613 - 0.01175224613 x \quad 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x \quad x \leq 0.5 \end{array} \right) \\
y_{coord} = & \text{piecewise} \left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x) \right) \\
& + \text{piecewise} \left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x) \right) \\
& + \frac{t}{2} (.2969 \cdot \text{sqrt}(x) - .126 x - .3516 x^2 \\
& + .2843 x^3 - .1015 x^4) \cos \left(\arctan \left(d \left(\text{piecewise} \left(x > p, \frac{k \cdot m^3}{6} (1-x), x \leq p, \right. \right. \right. \right. \\
& \left. \left. \left. \frac{k}{6} (x^3 - 3m \cdot x^2 + m^2(3-m)x) \right) \right) dx \right) \\
y_{coord} = & 2 \left(\begin{array}{l} 0.01175224613 - 0.01175224613 x \quad 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x \quad x \leq 0.5 \end{array} \right) \quad (7) \\
& + \frac{0.7500000000 (.2969 \sqrt{x} - 0.126 x - 0.3516 x^2 + 0.2843 x^3 - 0.1015 x^4)}{\sqrt{1 + \frac{d \left(\begin{array}{l} 0.01175224613 - 0.01175224613 x \quad 0.5 < x \\ 60.23333333 x^3 - 10.48060000 x^2 + 0.2026249333 x \quad x \leq 0.5 \end{array} \right)^2}{dx^2}}}
\end{aligned}$$

$$p := 0.5$$

$$0.5 \quad (8)$$