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Structural Properties of Litecast 150mm Deep Beam

Steel

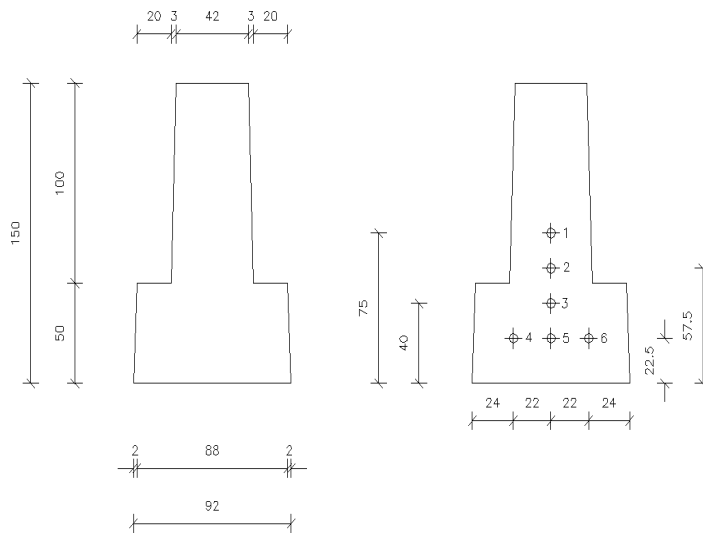
Characteristic Strength, f_{pk} 1770 N/mm²
 Young's Modulus, E_s 200 kN/mm²
 Tendon Diameter 5 mm

Concrete

Compressive Strength at transfer, $f_{ci}(t)$ 40 N/mm²
 Compressive Strength-cylinder, $f_{ck}(28)$ 55 N/mm²
 Compressive Strength-cube, $f_{cu}(28)$ 65 N/mm²
 Compressive Strength at transfer, $f_c(t)$ 37 N/mm²
 Youngs Modulus at transfer, $E_c(t)$ 29 kN/mm²
 Youngs Modulus at 28 days, $E_c(28)$ 36 kN/mm²

Calculations

Prepared in accordance with BS EN 1992-1-1:2004



	Area	yb	b	Depth	Inertia	Zt	Zb
	mm ²	mm	mm	mm	mm ⁴	mm ³	mm ³
Constants	9000	61.85	42	150	17027469	193169	275294

Product	Servicability Limit State		Ultimate Limit State		Wire Positions
	XC1	XC2-XC3	Bending	Shear	
	+ve kNm	+ve kNm	M _{Rult} kNm	kN	
L4	3.858	5.311	7.910	15.669	1,3,4,6