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1. ESTRUTURA

1.1. Geometria

1.1.1. Barras

1.1.1.1. Tabela resumo

Tabela resumo													
Material		Série	Perfil	Comprimento			Volume			Peso			
Tipo	Designação			Perfil (m)	Série (m)	Material (m)	Perfil (m³)	Série (m³)	Material (m³)	Perfil (kg)	Série (kg)	Material (kg)
Aço laminado	A-36 250Mpa	Barra redonda	1/4"	803.772	803.772	1438.764	0.025	0.025	0.173	199.82	199.82	1356.27
		Cantoneira	L 1.1/2 x 1/8"	634.992	634.992		0.147	0.147		1156.45	1156.45	
Aço dobrado	CF-26	Perfis em Ue formados a frio	U 150 x 60 x 20 x 3,00, Caixa dupla soldada	434.000	3431.038	3431.038	0.755	3.364	3.364	5929.91	26404.74	26404.74
			U 150 x 60 x 20 x 3,00	2997.038			2.608			20474.83		
Concreto	C20, em geral	Retangular	30x15	228.000	228.000	608.000	0.000	0.000	17.100	25650.00	25650.00	68400.00
		Viga alta retangular	15x30	380.000	380.000		17.100	17.100		42750.00	42750.00	

2. FUNDAÇÃO

2.1. Elementos de fundação isolados

2.1.1. Medição

Referências: N33, N35, N37, N39, N41, N85, N103, N81, N77, N117, N115, N73, N113, N111, N69, N109, N65, N61, N107, N1, N3, N5, N7, N9, N11, N13, N17, N21, N25, N89, N91, N93, N101, N95, N97, N99, N105, N29, N53 e N57		CA-50	CA-60	Total
Nome da armadura		Ø10	Ø4.2	
Armadura estribos XZ	Comprimento (m) Peso (kg)	2x2.62 2x1.61		5.24 3.23
Armadura estribos YZ	Comprimento (m) Peso (kg)	2x2.58 2x1.59		5.16 3.18
Armadura estribos XY	Comprimento (m) Peso (kg)	2x3.36 2x2.07		6.72 4.14
Armadura diagonal	Comprimento (m) Peso (kg)		1x3.01 1x0.33	3.01 0.33
Armadura diagonal	Comprimento (m) Peso (kg)		1x2.99 1x0.33	2.99 0.33
Totais	Comprimento (m) Peso (kg)	17.12 10.55	6.00 0.66	 11.21
Total com perdas (10.00%)	Comprimento (m) Peso (kg)	18.83 11.61	6.60 0.72	 12.33

Referências: E (N33, N35, N37, N39, N41, N85, N103, N81, N77, N117, N115, N73, N113, N111, N69, N109, N65, N61, N107, N1, N3, N5, N7, N9, N11, N13, N17, N21, N25, N89, N91, N93, N101, N95, N97, N99, N105, N29, N53 e N57)		CA-50		Total
Nome da armadura		Ø8	Ø12.5	
Armadura vertical	Comprimento (m) Peso (kg)		6x5.47 6x5.27	32.82 31.61
Armadura horizontal	Comprimento (m) Peso (kg)	33x0.95 33x0.38		31.35 12.38
Totais	Comprimento (m) Peso (kg)	31.35 12.38	32.82 31.61	 43.99
Total com perdas (10.00%)	Comprimento (m) Peso (kg)	34.49 13.62	36.10 34.77	 48.39

Referências: P26, P25, P4, Z(7.50, 80.00), P8, P10, P1, P2, P3, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P22, P21, P23, P24, P58, P57, P56, P55, P54, P53, P52, P43, P44, P45, P46, P47, P48, P49, P50 e P51		CA-50			Total
Nome da armadura		Ø6.3	Ø10	Ø12.5	
Malha inferior - Armadura X	Comprimento (m) Peso (kg)		4x0.97 4x0.60		3.88 2.39
Malha inferior - Armadura Y	Comprimento (m) Peso (kg)		4x0.93 4x0.57		3.72 2.29
Arranque - Estribos	Comprimento (m) Peso (kg)	3x0.76 3x0.19			2.28 0.56
Arranque - Armadura longitudinal	Comprimento (m) Peso (kg)			4x1.08 4x1.04	4.32 4.16
Totais	Comprimento (m) Peso (kg)	2.28 0.56	7.60 4.68	4.32 4.16	 9.40
Total com perdas (10.00%)	Comprimento (m) Peso (kg)	2.51 0.62	8.36 5.14	4.75 4.58	 10.34

Resumo de medição (incluídas perdas de aço)

	CA-50 (kg)					CA-60 (kg)	Concreto (m³)	
Elemento	Ø6.3	Ø8	Ø10	Ø12.5	Total	Ø4.2	C20, em geral	Limpeza
Referências: N33, N35, N37, N39, N41, N85, N103, N81, N77, N117, N115, N73, N113, N111, N69, N109, N65, N61, N107, N1, N3, N5, N7, N9, N11, N13, N17, N21, N25, N89, N91, N93, N101, N95, N97, N99, N105, N29, N53 e N57			40x11.61		464.40	40x0.72	40x0.45	40x0.08
Referências: E (N33, N35, N37, N39, N41, N85, N103, N81, N77, N117, N115, N73, N113, N111, N69, N109, N65, N61, N107, N1, N3, N5, N7, N9, N11, N13, N17, N21, N25, N89, N91, N93, N101, N95, N97, N99, N105, N29, N53 e N57)		40x13.62		40x34.77	1935.60		40x0.63	40x0.00
Referências: P26, P25, P4, Z(7.50, 80.00), P8, P10, P1, P2, P3, P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P22, P21, P23, P24, P58, P57, P56, P55, P54, P53, P52, P43, P44, P45, P46, P47, P48, P49, P50 e P51	39x0.61		39x5.15	39x4.58	403.26		39x0.19	39x0.06
Totais	23.79	544.80	665.25	1569.42	2803.26	28.80	50.44	5.74

2.2. Vigas

2.2.1. Medição

Referência: C.1 [N5-N3]		CA-50		Total
Nome da armadura		Ø8	Ø12.5	
Armadura viga - Armadura inferior	Comprimento (m) Peso (kg)		2x5.32 2x5.12	10.64 10.25
Armadura viga - Armadura superior	Comprimento (m) Peso (kg)		2x5.46 2x5.26	10.92 10.52
Armadura viga - Estribo	Comprimento (m) Peso (kg)	15x1.33 15x0.53		19.95 7.88
Totais	Comprimento (m) Peso (kg)	19.95 7.88	21.56 20.77	 28.65
Total com perdas (10.00%)	Comprimento (m) Peso (kg)	21.95 8.67	23.72 22.85	 31.52

Referências: C.1 [N3-P1], C.1 [N91-P12], C.1 [N35-P4], C.1 [N29-P48], C.1 [N7-P2], C.1 [N111-P21], C.1 [N101-P14], C.1 [N89-P11], C.1 [N9-P3], C.1 [N85-P57], C.1 [N115-P23], C.1 [N85-P58], C.1 [N21-P46], C.1 [N11-P43], C.1 [N97-P16], C.1 [N69-P53], C.1 [N81-P56], C.1 [N37-Z(7.50, 80.00)], C.1 [N93-P13], C.1 [N13-P44], C.1 [N107-P19], C.1 [N77-P55], C.1 [N53-P49], C.1 [N73-P54], C.1 [N109-P20], C.1 [N117-P25], C.1 [N17-P45], C.1 [N105-P18], C.1 [N113-P22], C.1 [N57-P50], C.1 [N61-P51], C.1 [N99-P17], C.1 [N65-P52], C.1 [N117-P24], C.1 [N103-P26], C.1 [N39-P8], C.1 [N41-P10], C.1 [N25-P47] e C.1 [N101-P15]		CA-50		Total
Nome da armadura		Ø8	Ø12.5	
Armadura viga - Armadura inferior	Comprimento (m) Peso (kg)		2x2.79 2x2.69	5.58 5.37
Armadura viga - Armadura superior	Comprimento (m) Peso (kg)		2x2.89 2x2.78	5.78 5.57

Referências: C.1 [N3-P1], C.1 [N91-P12], C.1 [N35-P4], C.1 [N29-P48], C.1 [N7-P2], C.1 [N111-P21], C.1 [N101-P14], C.1 [N89-P11], C.1 [N9-P3], C.1 [N85-P57], C.1 [N115-P23], C.1 [N85-P58], C.1 [N21-P46], C.1 [N11-P43], C.1 [N97-P16], C.1 [N69-P53], C.1 [N81-P56], C.1 [N37-Z(7.50, 80.00)], C.1 [N93-P13], C.1 [N13-P44], C.1 [N107-P19], C.1 [N77-P55], C.1 [N53-P49], C.1 [N73-P54], C.1 [N109-P20], C.1 [N117-P25], C.1 [N17-P45], C.1 [N105-P18], C.1 [N113-P22], C.1 [N57-P50], C.1 [N61-P51], C.1 [N99-P17], C.1 [N65-P52], C.1 [N117-P24], C.1 [N103-P26], C.1 [N39-P8], C.1 [N41-P10], C.1 [N25-P47] e C.1 [N101-P15]		CA-50		Total
Nome da armadura		Ø8	Ø12.5	
Armadura viga - Estribo	Comprimento (m) Peso (kg)	7x1.33 7x0.53		9.31 3.68
Totais	Comprimento (m) Peso (kg)	9.31 3.68	11.36 10.94	 14.62
Total com perdas (10.00%)	Comprimento (m) Peso (kg)	10.24 4.05	12.50 12.03	 16.08

Referências: C.1 [P1-N1], C.1 [P12-N89], C.1 [P4-N33], C.1 [P48-N25], C.1 [P2-N5], C.1 [P21-N109], C.1 [P14-N93], C.1 [P11-N1], C.1 [P3-N7], C.1 [P57-N81], C.1 [P23-N113], C.1 [P58-N41], C.1 [P46-N17], C.1 [P43-N9], C.1 [P16-N95], C.1 [P53-N65], C.1 [P56-N77], C.1 [Z(7.50, 80.00)-N35], C.1 [P13-N91], C.1 [P44-N11], C.1 [P19-N105], C.1 [P55-N73], C.1 [P49-N29], C.1 [P54-N69], C.1 [P20-N107], C.1 [P25-N103], C.1 [P45-N13], C.1 [P18-N99], C.1 [P22-N111], C.1 [P50-N53], C.1 [P51-N57], C.1 [P17-N97], C.1 [P52-N61], C.1 [P24-N115], C.1 [P26-N33], C.1 [P8-N37], C.1 [P10-N39], C.1 [P47-N21] e C.1 [P15-N95]		CA-50		Total
Nome da armadura		Ø8	Ø12.5	
Armadura viga - Armadura inferior	Comprimento (m) Peso (kg)		2x2.79 2x2.69	5.58 5.37
Armadura viga - Armadura superior	Comprimento (m) Peso (kg)		2x2.89 2x2.78	5.78 5.57
Armadura viga - Estribo	Comprimento (m) Peso (kg)	7x1.33 7x0.53		9.31 3.68
Totais	Comprimento (m) Peso (kg)	9.31 3.68	11.36 10.94	 14.62
Total com perdas (10.00%)	Comprimento (m) Peso (kg)	10.24 4.05	12.50 12.03	 16.08

Resumo de medição (incluídas perdas de aço)

Elemento	CA-50 (kg)			Concreto (m³)	
	Ø8	Ø12.5	Total	C20, em geral	Limpeza
Referência: C.1 [N5-N3]	8.67	22.85	31.52	0.66	0.16
Referências: C.1 [N3-P1], C.1 [N91-P12], C.1 [N35-P4], C.1 [N29-P48], C.1 [N7-P2], C.1 [N111-P21], C.1 [N101-P14], C.1 [N89-P11], C.1 [N9-P3], C.1 [N85-P57], C.1 [N115-P23], C.1 [N85-P58], C.1 [N21-P46], C.1 [N11-P43], C.1 [N97-P16], C.1 [N69-P53], C.1 [N81-P56], C.1 [N37-Z(7.50, 80.00)], C.1 [N93-P13], C.1 [N13-P44], C.1 [N107-P19], C.1 [N77-P55], C.1 [N53-P49], C.1 [N73-P54], C.1 [N109-P20], C.1 [N117-P25], C.1 [N17-P45], C.1 [N105-P18], C.1 [N113-P22], C.1 [N57-P50], C.1 [N61-P51], C.1 [N99-P17], C.1 [N65-P52], C.1 [N117-P24], C.1 [N103-P26], C.1 [N39-P8], C.1 [N41-P10], C.1 [N25-P47] e C.1 [N101-P15]	39x4.05	39x12.03	627.12	39x0.28	39x0.07
Referências: C.1 [P1-N1], C.1 [P12-N89], C.1 [P4-N33], C.1 [P48-N25], C.1 [P2-N5], C.1 [P21-N109], C.1 [P14-N93], C.1 [P11-N1], C.1 [P3-N7], C.1 [P57-N81], C.1 [P23-N113], C.1 [P58-N41], C.1 [P46-N17], C.1 [P43-N9], C.1 [P16-N95], C.1 [P53-N65], C.1 [P56-N77], C.1 [Z(7.50, 80.00)-N35], C.1 [P13-N91], C.1 [P44-N11], C.1 [P19-N105], C.1 [P55-N73], C.1 [P49-N29], C.1 [P54-N69], C.1 [P20-N107], C.1 [P25-N103], C.1 [P45-N13], C.1 [P18-N99], C.1 [P22-N111], C.1 [P50-N53], C.1 [P51-N57], C.1 [P17-N97], C.1 [P52-N61], C.1 [P24-N115], C.1 [P26-N33], C.1 [P8-N37], C.1 [P10-N39], C.1 [P47-N21] e C.1 [P15-N95]	39x4.05	39x12.03	627.12	39x0.28	39x0.07
Totais	324.57	961.19	1285.76	22.65	5.31

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