



PILAR	PERFIL	COMP.	METÁLICAS 3D				BRIDGE ADVANCED 3D						RELAÇÃO (BRIDGE/METÁLICAS 3D)			
			AXIAL (KN)	My (KN.cm)	Mz (KN.cm)	% UTIL.	AXIAL (KN)	ELU VENTO X		ELU VENTO Y		% UTIL.	AXIAL	My	Mz	% UTIL.
								My (KN.cm)	Mz (KN.cm)	My (KN.cm)	Mz (KN.cm)					
PM1	HP 310x110	8,66	52,31	5583,06	4633,44	23,77	40,08	1362,20	5262,60	6017,20	1577,80	35,83	77%	108%	114%	151%
PM2	W 360x72	8,66	49,38	6388,62	735,00	20,55	54,88	1342,60	813,40	6713,00	39,20	37,39	111%	105%	111%	182%
PM3	W 360x72	8,66	49,56	8194,76	684,04	25,97	54,88	2920,40	813,40	8036,00	39,20	37,39	111%	98%	119%	144%
PM4	W 360x72	8,66	85,81	8718,08	673,26	26,92	54,88	2930,20	813,40	8134,00	29,40	42,75	64%	93%	121%	159%
PM5	W 360x72	8,66	77,36	8838,62	670,32	27,26	54,88	1773,80	813,40	8183,00	29,40	42,93	71%	93%	121%	157%
PM6	W 360x72	8,66	79,18	8881,74	665,42	27,26	54,88	1773,80	803,60	8183,00	19,60	42,83	69%	92%	121%	157%
PM7	W 360x72	8,66	79,34	8894,48	848,68	28,17	54,88	1773,80	803,60	8183,00	19,60	42,83	69%	92%	95%	152%
PM8	W 360x72	8,66	80,29	8898,40	658,56	27,06	54,88	1773,80	803,60	8143,80	9,80	42,68	68%	92%	122%	158%
PM9	W 360x72	8,66	78,01	8899,38	656,60	27,05	54,88	1773,80	803,60	8192,80	9,80	42,87	70%	92%	122%	158%
PM10	W 360x72	8,66	79,20	8900,36	651,70	26,97	54,88	1773,80	803,60	8192,80	0,00	42,87	69%	92%	123%	159%
PM11	W 360x72	8,66	79,20	8900,36	648,76	27,04	54,88	1254,40	793,80	8183,00	0,00	42,76	69%	92%	122%	158%
PM12	W 360x72	8,66	79,20	8899,38	644,84	27,12	54,88	1254,40	793,80	8183,00	0,00	42,76	69%	92%	123%	158%
PM13	W 360x72	8,66	79,19	8899,38	641,90	27,20	54,88	1254,40	793,80	8183,00	0,00	42,76	69%	92%	124%	157%
PM14	W 360x72	8,66	79,19	8898,40	638,96	27,28	54,88	1254,40	793,80	8183,00	9,80	42,76	69%	92%	124%	157%
PM15	W 360x72	8,66	79,19	8896,44	637,00	27,36	54,88	1254,40	793,80	8183,00	9,80	42,76	69%	92%	125%	156%
PM16	W 360x72	8,66	79,19	8887,62	635,04	27,42	54,88	1254,40	784,00	8183,00	19,60	42,56	69%	92%	123%	155%
PM17	W 360x72	8,66	79,19	8859,20	633,08	27,43	54,88	1254,40	784,00	8183,00	19,60	42,46	69%	92%	124%	155%
PM18	W 360x72	8,66	79,24	8764,14	631,12	27,26	54,88	1254,40	784,00	8183,00	29,40	42,59	69%	93%	124%	156%
PM19	W 360x72	8,66	79,18	8467,20	627,20	26,53	54,88	1254,40	784,00	8173,20	29,40	42,59	69%	97%	125%	161%
PM20	W 360x72	8,66	77,46	7414,68	820,26	23,52	54,88	1244,60	774,20	8036,00	39,20	41,97	71%	108%	94%	178%
PM21	W 360x72	8,66	68,12	4836,30	610,54	15,65	47,04	686,00	774,20	6713,00	39,20	36,39	69%	139%	127%	233%
PM22	HP 310x110	8,66	52,33	4996,04	2919,42	22,90	44,49	735,00	3733,80	8339,80	1577,80	34,40	85%	167%	128%	150%
PM23	W 200x35,9	6,04	346,50	910,42	0,00	42,39	353,78	0,00	0,00	1078,00	0,00	32,39	102%	118%	0	76%
PM42	W 200x35,9	6,04	343,91	769,30	0,00	42,13	353,68	0,00	0,00	1078,00	0,00	32,39	103%	140%	0	77%
PM43	W 200x53,0	6,04	231,99	0,00	0,00	16,34	220,89	0,00	970,20	78,40	970,20	20,70	95%	0	0	127%
PM44	W 200x53,0	6,04	172,61	0,00	0,00	12,15	180,22	0,00	156,80	29,40	156,80	7,98	104%	0	0	66%
PM45	W 200x53,0	6,04	172,61	0,00	0,00	12,15	180,22	0,00	254,80	29,40	166,60	9,30	104%	0	0	77%
PM46	W 200x53,0	6,04	231,98	0,00	0,00	16,33	235,79	0,00	1019,20	78,40	1019,20	21,90	102%	0	0	134%
PM47	W 200x53,0	6,04	461,02	1328,88	0,00	36,71	483,83	0,00	137,20	1528,80	68,60	27,40	105%	115%	0	75%
PM64	W 200x53,0	6,04	461,02	1203,44	0,00	36,02	483,92	0,00	58,80	1528,80	68,60	26,21	105%	127%	0	73%
PM65	W 200x53,0	6,04	304,48	0,00	0,00	21,44	317,62	0,00	989,80	78,40	989,80	17,44	104%	0	0	81%
PM66	W 200x53,0	6,04	178,64	0,00	0,00	12,58	185,51	0,00	176,40	29,40	176,40	7,35	104%	0	0	58%
PM67	W 200x53,0	6,04	178,64	0,00	0,00	12,58	185,51	0,00	156,80	29,40	176,40	7,35	104%	0	0	58%
PM68	W 200x53,0	6,04	304,48	0,00	0,00	21,43	332,71	0,00	931,00	78,40	931,00	17,55	109%	0	0	82%
PM69	W 200x35,9	6,04	338,00	910,42	0,00	41,42	351,62	0,00	0,00	1078,00	0,00	32,26	104%	118%	0	78%
PM88	W 200x35,9	6,04	320,21	669,34	0,00	36,27	351,53	0,00	0,00	1078,00	0,00	32,26	110%	161%	0	89%
PM89	HP 310x110	8,66	52,31	5583,06	4634,42	23,77	40,08	1362,20	5262,60	4478,60	2851,80	62,57	77%	80%	114%	263%
PM90	W 360x72	8,66	49,38	6388,62	735,00	20,55	54,88	1342,60	813,40	6017,20	78,40	34,76	111%	94%	111%	169%
PM91	W 360x72	8,66	49,56	8194,76	675,22	25,97	54,88	2920,40	813,40	8731,80	68,60	45,00	111%	107%	120%	173%
PM92	W 360x72	8,66	85,81	8718,08	672,28	26,92	54,88	2930,20	813,40	8829,80	58,80	45,37	64%	101%	121%	169%
PM93	W 360x72	8,66	77,36	8838,62	669,34	27,24	54,88	1773,80	813,40	8878,80	49,00	45,55	71%	100%	122%	167%
PM94	W 360x72	8,66	79,18	8881,74	665,42	27,26	54,88	1773,80	803,60	8878,80	39,20	45,45	69%	100%	121%	167%
PM95	W 360x72	8,66	79,34	8894,48	848,68	28,17	54,88	1773,80	803,60	8878,80	39,20	45,45	69%	100%	95%	161%
PM96	W 360x72	8,66	80,29	8898,40	658,56	27,06	54,88	1773,80	803,60	8839,60	29,40	45,30	68%	99%	122%	167%
PM97	W 360x72	8,66	78,01	8899,38	655,62	27,05	54,88	1773,80	803,60	8878,80	19,60	45,45	70%	100%	123%	168%
PM98	W 360x72	8,66	79,20	8900,36	651,70	26,97	54,88	1773,80	803,60	8878,80	9,80	45,45	69%	100%	123%	169%
PM99	W 360x72	8,66	79,20	8900,36	647,78	27,04	54,88	1254,40	793,80	8878,80	0,00	45,35	69%	100%	123%	168%
PM100	W 360x72	8,66	79,20	8899,38	644,84	27,12	54,88	1254,40	793,80	8878,80	0,00	45,35	69%	100%	123%	167%
PM101	W 360x72	8,66	79,19	8899,38	651,70	27,20	54,88	1254,40	793,80	8878,80	9,80	45,35	69%	100%	122%	167%

Tabela 4 – Esforços Solicitantes de Cálculos nos Pilares sob flexocompressão

* Contribuição técnica ao **Construmetal 2014** – Congresso Sulamericano de Estruturas Metálicas – 02 a 04 de setembro de 2014, São Paulo, SP, Brasil.