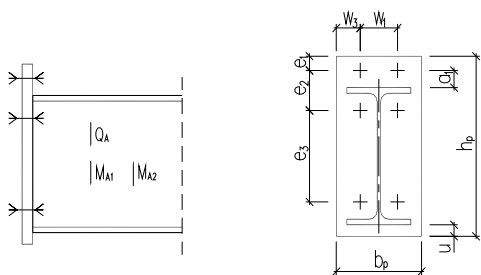


POŁĄCZENIA SPRĘŻONE IPE													IH1E							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
PROFIL	ŚRUBA												PÓŁKA	ŚRODNIK	$M_{A1} \downarrow$		$M_{A2} \uparrow$		Q_A	
		H	HZ	H	HZ	H	HZ													
		kNm	kNm	kN	kN	kN	kN													
IPE		d_p	h_p	b_p	a_2	u	e_3	e_4	w_1	w_2	w_3	a_F	a_s	kNm	kNm	kN	kN			
120	16	25	140	120	35	10	50	45	70		25	4	3	8.5	9.5	47.5	55.4			
140	16	25	160	120	35	10	70	45	70		25	4	3	12.4	13.9	59.2	69.1			
160	16	25	180	120	40	10	80	50	70		25	4	3	17.4	19.6	72.0	84.0			
180	20	30	200	150	50	10	80	60	90		30	4	3	23.4	26.3	85.9	100.2			
	16	25		120	40		100	50	70		25			24.5						
200	20	30	220	150	50	10	100	60	90		30	5	3	31.0	34.9	100.8	117.6			
	16	25		120	40		120	50	70		25			28.0						
220	20	30	260	150	50	20	120	70	90		30	5	3	40.3	45.4	116.8	136.3			
	16	25		120	40		140	60	70		25			31.6						
240	24	35	280	180	60	20	120	80	110		35	5	3	51.8	58.3	133.9	156.2			
	20	30		150	50		140	70	90		30			53.3						
	16	25		120	40		160	60	70		25			35.1						
270	24	35	310	180	60	20	150	80	110		35	6	3	68.6	77.2	160.4	187.1			
	20	30		150	50		170	70	90		30			61.9						
	16	25		135	40		190	60	75		30			40.5						
300	27	45	340	210	70	20	160	90	130		40	6	3	89.1	100.3	191.7	223.6			
	24	35		180	60		180	80	110		35			92.9						
	20	30		150	50		200	70	90		30			70.5						
330	27	45	370	210	70	20	190	90	130		40	6	3	114.1	128.3	227.7	259.9			
	24	35		180	60		210	80	110		35			104.6						
	20	30		160	50		230	70	90		35			79.0						
360	30	45	400	220	75	20	210	95	130		45	7	4	144.6	162.7	259.2	302.4			
	27	45		210	75		210	95	130		40			145.5						
	24	35		180	65		230	85	110		35			106.1						
	20	30		170	55		250	75	90		40			85.8						
400	30	45	460	220	75	30	250	105	130		45	7	4	178.2	200.5	309.6	361.2			
	27	45		210	75		250	105	130		40			166.1						
	24	35		180	65		270	95	110		35			125.2						
	20	30		180	55		290	85	90		45			97.4						
450	30	45	510	220	75	30	300	105	130		45	8	4	205.9	231.7	339.3	381.7			
	27	45		210	75		300	105	130		40			191.9						
	24	35		190	65		320	95	110		40			149.6						
	20	30		190	55		340	85	90		50			111.7						
500	30	45	560	230	75	30	350	105	140		45	8	3	233.5	262.7	339.3	381.7			
	27	45		220	75		350	105	140		40			217.7						
	24	35		200	65		370	95	120		40			169.1						
	20	30		200	55		390	85	100		50			125.9						
550	30	45	610	230	80	30	390	110	140		45	8	3	258.4	290.7	339.3	381.7			
	27	45		220	80		390	110	140		40			239.3						
	24	35		210	70		410	100	120		45			186.7						
600	30	45	660	230	80	30	440	110	140		45	9	3	285.9	321.6	339.3	381.7			
	27	45		220	80		440	110	140		40			266.5						
	24	35		220	70		460	100	120		50			206.1						

POŁĄCZENIA SPRĘŻONE IPE													IH2E							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
PROFIL	ŚRUBA												PÓŁKA	ŚRODNIK	$M_{A1} \downarrow$		$M_{A2} \uparrow$		Q_A	
		H	HZ	H	HZ	H	HZ													
		kNm	kNm	kN	kN	kN	kN													
IPE		d_p	h_p	b_p	a_2	u	e_3	e_4	w_1	w_2	w_3	a_F	a_s	kNm	kNm	kN	kN			
300	20	35	340	240	50	20	200	70	90	45	30	6	3	89.1	100.3	191.7	233.6			
330	20	35	370	240	50	20	230	70	90	45	30	6	3	114.1	128.3	222.7	259.9			
360	24	40	400	290	65	20	230	85	110	55	35	7	4	144.6	162.7	259.2	302.4			
	20	35		240	55		250	75	90	45	30			137.6	154.8					
400	24	40	460	290	65	30	270	95	110	55	35	6	4	185.6	208.8	309.6	361.2			
	20	35		240	55		290	85	90	45	30			155.9	175.3			301.6	339.3	
450	27	50	510	340	75	30	300	105	130	65	40	8	4	240.0	270.0	380.7	444.1			
	24	40		290	65		320	95	110	55	35			239.3	269.2			380.7	444.1	
	20	35		240	55		340	85	90	45	30			178.7	201.0			301.6	339.3	
500	27	50	560	350	75	30	350	105	140	65	40	8	4	308.8	347.4	459.0	535.5			
	24	40		300	65		370	95	120	55	35			270.5	304.4			434.3	488.6	
	20	35		250	55		390	85	100	45	30			201.4	226.5			301.6	339.3	
550	30	50	610	370	80	30	390	110	140	70	45	9	5	390.4	439.2	549.4	641.0			
	27	50		350	80		390	110	140	65	40			385.4	433.5			549.4	618.4	
	24	40		300	70		410	100	120	55	35			298.7	336.0			434.3	488.6	
	20	35		250	60		430	90	100	45	30			221.8	249.6			301.6	339.3	
600	30	50	660	370	80	30	440	110	140	70	45	10	5	491.2	552.6	648.0	756.0			
	27	50		350	80		440	110	140	65	40			426.4	479.7			549.7	618.4	
	24	40		300	70		460	100	120	55	35			329.8	371.0			434.3	488.6	
	20	35		250	60		480	90	100	45	30			244.5	275.0			301.6	339.3	

POŁĄCZENIA SPRĘŻONE IPE

I H 3 E



PROFIL	ŚRUBA														PÓŁKA	ŚRODNIK						
																	M _{A1} ↓		M _{A2} ↑		Q _A	
																	H	HZ	H	HZ	H	HZ
IPE		d _p	h _p	b _p	a ₁	u	e ₁	e ₂	e ₃	w ₁	w ₂	w ₃	a _F	a _s	kNm	kNm	kNm	kNm	kN	kN		
200	16	20	265	120	30	10	25	70	120	70		25	5	3	31.0	34.9	19.4	22.0	96.5	108.6		
220	16	20	295	120	30	20	25	70	140	70		25	5	3	40.3	45.4	23.4	26.6	96.5	108.6		
240	16	20	315	120	30	20	25	70	160	70		25	5	3	51.8	58.3	28.0	31.7	96.5	108.6		
270	16	20	345	135	30	20	25	70	190	75		30	6	3	68.6	77.2	36.0	40.5	96.5	108.6		
300	16	20	375	150	30	20	25	70	220	80		35	6	3	89.1	100.3	40.7	45.8	96.5	108.6		
330	20	20	420	160	40	20	30	95	220	90		35	6	3	114.1	128.3	33.1	37.5	150.8	169.6		
	16		405		30		25	75	240	80		40			101.4	114.0	44.0	49.9	96.5	108.6		
360	24	25	465	180	50	20	35	115	230	110		35	7	3	144.6	162.7	48.2	54.6	217.1	244.3		
	20	20	450	170	40		30	95	250	90		40			7	3	143.2	162.3	43.3	49.1	150.8	169.6
	16	20	435	170	30		25	75	270	90		40			6	3	110.8	124.6	49.4	55.6	96.5	108.6
400	24	25	515	180	50	30	35	115	270	110		35	7	3	185.6	208.8	57.8	65.5	217.1	244.3		
	20	20	500		40		30	95	290	90		45			7	3	168.6	191.1	55.5	62.9	150.8	169.6
	16	20	485		30		25	75	310	90		45			6	3	123.4	138.9	55.7	62.7	96.5	108.6
450	24	25	565	190	50	30	35	115	320	110		40	8	3	240.0	270.0	75.5	85.5	217.1	244.3		
	20	20	550		40		30	95	340	90		50					194.3	220.2	73.6	83.5	150.8	169.6
500	27	30	630	220	60	30	40	135	350	140		40	8	3	308.8	347.4	110.8	125.5	274.8	309.2		
	24	25	615	200	50		35	115	370	120		40					283.7	321.5	99.1	112.3	217.1	244.3
	20	20	600	200	40		30	95	390	100		50					218.9	248.1	98.9	112.1	150.8	169.6
550	27	30	680	220	60	30	40	140	390	140		40	9	3	390.4	439.2	116.2	131.7	274.8	309.2		
	24	25	665	210	50		35	120	410	120		45			9	3	329.4	373.3	107.6	121.9	217.1	244.3
	20	20	650	210	40		30	100	430	100		55			8	3	244.1	276.7	105.4	119.4	150.8	169.6
600	30	30	735	230	60	30	45	140	440	140		45	10	3	478.3	542.1	151.6	171.8	339.3	381.7		
	27	30	730	220	60		40	140	440	140		40			10	3	441.8	500.8	143.5	162.6	274.8	309.2
	24	25	715	220	50		35	120	460	120		50			10	3	366.3	415.2	141.2	160.1	217.1	244.3
	20	20	700	220	40		30	100	480	110		55			8	3	269.7	305.6	132.3	150.0	150.8	169.6