

# Anexo 1

## Incrementos de esfuerzos Dovela 4 – Inferior 4 (D4-I4)

Fecha	No.	Δ Esf (kg/cm <sup>2</sup> )	Fecha	No.	Δ Esf (kg/cm <sup>2</sup> )	Fecha	No.	Δ Esf (kg/cm <sup>2</sup> )	Fecha	No.	Δ Esf (kg/cm <sup>2</sup> )
01/04/2007	1	230.034	17/05/2007	47	217.917	02/07/2007	93	183.540	17/08/2007	139	266.112
02/04/2007	2	218.253	18/05/2007	48	235.914	03/07/2007	94	190.785	18/08/2007	140	240.765
03/04/2007	3	211.596	19/05/2007	49	239.673	04/07/2007	95	187.383	19/08/2007	141	230.202
04/04/2007	4	206.745	20/05/2007	50	224.049	05/07/2007	96	192.150	20/08/2007	142	224.049
05/04/2007	5	203.847	21/05/2007	51	225.330	06/07/2007	97	202.566	21/08/2007	143	239.316
06/04/2007	6	221.844	22/05/2007	52	222.096	07/07/2007	98	216.384	22/08/2007	144	221.235
07/04/2007	7	240.345	23/05/2007	53	215.943	08/07/2007	99	191.205	23/08/2007	145	234.885
08/04/2007	8	230.370	24/05/2007	54	235.914	09/07/2007	100	196.077	24/08/2007	146	237.027
09/04/2007	9	247.002	25/05/2007	55	239.589	10/07/2007	101	193.179	25/08/2007	147	240.513
10/04/2007	10	246.141	26/05/2007	56	213.129	11/07/2007	102	216.384	26/08/2007	148	218.337
11/04/2007	11	231.315	27/05/2007	57	199.059	12/07/2007	103	191.205	27/08/2007	149	225.855
12/04/2007	12	248.871	28/05/2007	58	203.763	13/07/2007	104	196.077	28/08/2007	150	213.822
13/04/2007	13	228.921	29/05/2007	59	210.756	14/07/2007	105	193.179	29/08/2007	151	213.822
14/04/2007	14	247.086	30/05/2007	60	216.552	15/07/2007	106	220.983	30/08/2007	152	244.104
15/04/2007	15	261.156	31/05/2007	61	216.552	16/07/2007	107	218.400	31/08/2007	153	228.921
16/04/2007	16	237.615	01/06/2007	62	239.589	17/07/2007	108	218.862	01/09/2007	154	223.713
17/04/2007	17	229.005	02/06/2007	63	225.414	18/07/2007	109	232.575	02/09/2007	155	223.125
18/04/2007	18	237.447	03/06/2007	64	247.506	19/07/2007	110	226.191	03/09/2007	156	224.490
19/04/2007	19	240.093	04/06/2007	65	212.877	20/07/2007	111	225.330	04/09/2007	157	222.768
20/04/2007	20	238.140	05/06/2007	66	209.643	21/07/2007	112	213.570	05/09/2007	158	228.144
21/04/2007	21	222.516	06/06/2007	67	220.983	22/07/2007	113	206.745	06/09/2007	159	224.574
22/04/2007	22	202.902	07/06/2007	68	209.979	23/07/2007	114	209.475	07/09/2007	160	241.038
23/04/2007	23	222.348	08/06/2007	69	219.702	24/07/2007	115	223.041	08/09/2007	161	237.951
24/04/2007	24	242.403	09/06/2007	70	206.829	25/07/2007	116	225.582	09/09/2007	162	235.410
25/04/2007	25	251.685	10/06/2007	71	199.752	26/07/2007	117	215.943	10/09/2007	163	238.392
26/04/2007	26	250.152	11/06/2007	72	195.909	27/07/2007	118	232.848	11/09/2007	164	238.392
27/04/2007	27	232.764	12/06/2007	73	188.391	28/07/2007	119	231.903	12/09/2007	165	209.559
28/04/2007	28	218.505	13/06/2007	74	189.252	29/07/2007	120	238.035	13/09/2007	166	187.299
29/04/2007	29	213.045	14/06/2007	75	178.332	30/07/2007	121	238.728	14/09/2007	167	184.905
30/04/2007	30	213.045	15/06/2007	76	189.168	31/07/2007	122	233.772	15/09/2007	168	181.650
01/05/2007	31	213.045	16/06/2007	77	188.391	01/08/2007	123	237.279	16/09/2007	169	195.993
02/05/2007	32	213.045	17/06/2007	78	189.252	02/08/2007	124	236.334	17/09/2007	170	192.234
03/05/2007	33	213.045	18/06/2007	79	178.332	03/08/2007	125	227.892	18/09/2007	171	195.489
04/05/2007	34	257.586	19/06/2007	80	178.500	04/08/2007	126	237.111	19/09/2007	172	189.588
05/05/2007	35	223.041	20/06/2007	81	185.241	05/08/2007	127	222.768	20/09/2007	173	197.442
06/05/2007	36	226.443	21/06/2007	82	170.058	06/08/2007	128	233.100	21/09/2007	174	213.570
07/05/2007	37	241.710	22/06/2007	83	176.106	07/08/2007	129	233.688	22/09/2007	175	199.752
08/05/2007	38	243.579	23/06/2007	84	176.106	08/08/2007	130	231.126	23/09/2007	176	181.650
09/05/2007	39	219.618	24/06/2007	85	174.237	09/08/2007	131	237.531	24/09/2007	177	193.011
10/05/2007	40	222.264	25/06/2007	86	193.599	10/08/2007	132	234.465	25/09/2007	178	185.661
11/05/2007	41	225.162	26/06/2007	87	182.259	11/08/2007	133	229.173	26/09/2007	179	193.767
12/05/2007	42	217.308	27/06/2007	88	188.475	12/08/2007	134	233.352	27/09/2007	180	199.920
13/05/2007	43	224.826	28/06/2007	89	195.300	13/08/2007	135	234.465	28/09/2007	181	185.493
14/05/2007	44	238.896	29/06/2007	90	185.157	14/08/2007	136	234.465	29/09/2007	182	176.967
15/05/2007	45	236.418	30/06/2007	91	194.796	15/08/2007	137	252.798	30/09/2007	183	175.266
16/05/2007	46	230.622	01/07/2007	92	193.515	16/08/2007	138	243.075	01/10/2007	184	181.566

## Incrementos de esfuerzos Dovela 4-Inferior 4 (D4-I4) [Anexo 1]

Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )
02/10/2007	185	186.858	17/11/2007	231	232.407	02/01/2008	277	251.685	17/02/2008	323	257.586
03/10/2007	186	184.044	18/11/2007	232	231.399	03/01/2008	278	258.510	18/02/2008	324	284.109
04/10/2007	187	188.664	19/11/2007	233	244.188	04/01/2008	279	234.549	19/02/2008	325	273.189
05/10/2007	188	213.570	20/11/2007	234	245.133	05/01/2008	280	238.476	20/02/2008	326	252.294
06/10/2007	189	188.475	21/11/2007	235	245.133	06/01/2008	281	238.476	21/02/2008	327	257.838
07/10/2007	190	181.839	22/11/2007	236	240.513	07/01/2008	282	239.841	22/02/2008	328	249.984
08/10/2007	191	180.285	23/11/2007	237	277.620	08/01/2008	283	247.674	23/02/2008	329	237.363
09/10/2007	192	181.755	24/11/2007	238	222.516	09/01/2008	284	261.408	24/02/2008	330	248.619
10/10/2007	193	178.080	25/11/2007	239	222.516	10/01/2008	285	234.045	25/02/2008	331	259.455
11/10/2007	194	183.960	26/11/2007	240	222.516	11/01/2008	286	248.451	26/02/2008	332	248.619
12/10/2007	195	177.660	27/11/2007	241	222.516	12/01/2008	287	244.188	27/02/2008	333	259.455
13/10/2007	196	181.398	28/11/2007	242	226.611	13/01/2008	288	260.736	28/02/2008	334	266.532
14/10/2007	197	191.394	29/11/2007	243	231.042	14/01/2008	289	245.301	29/02/2008	335	256.389
15/10/2007	198	206.661	30/11/2007	244	231.042	15/01/2008	290	245.301	01/03/2008	336	260.652
16/10/2007	199	206.661	01/12/2007	245	231.042	16/01/2008	291	239.757	02/03/2008	337	256.389
17/10/2007	200	206.661	02/12/2007	246	231.042	17/01/2008	292	239.232	03/03/2008	338	197.274
18/10/2007	201	206.661	03/12/2007	247	222.012	18/01/2008	293	248.619	04/03/2008	339	254.331
19/10/2007	202	206.661	04/12/2007	248	151.557	19/01/2008	294	238.140	05/03/2008	340	241.626
20/10/2007	203	186.606	05/12/2007	249	229.257	20/01/2008	295	238.140	06/03/2008	341	247.506
21/10/2007	204	188.916	06/12/2007	250	226.275	21/01/2008	296	238.140	07/03/2008	342	236.943
22/10/2007	205	205.632	07/12/2007	251	235.221	22/01/2008	297	238.560	08/03/2008	343	280.014
23/10/2007	206	205.632	08/12/2007	252	233.016	23/01/2008	298	239.757	09/03/2008	344	231.399
24/10/2007	207	227.724	09/12/2007	253	239.064	24/01/2008	299	239.757	10/03/2008	345	234.885
25/10/2007	208	219.282	10/12/2007	254	236.670	25/01/2008	300	240.597	11/03/2008	346	237.195
26/10/2007	209	194.019	11/12/2007	255	245.133	26/01/2008	301	239.757	12/03/2008	347	269.514
27/10/2007	210	199.563	12/12/2007	256	234.801	27/01/2008	302	266.784	13/03/2008	348	269.514
28/10/2007	211	199.563	13/12/2007	257	235.053	28/01/2008	303	242.403	14/03/2008	349	237.363
29/10/2007	212	215.523	14/12/2007	258	231.903	29/01/2008	304	234.969	15/03/2008	350	253.911
30/10/2007	213	198.387	15/12/2007	259	231.903	30/01/2008	305	274.386	16/03/2008	351	246.582
31/10/2007	214	194.460	16/12/2007	260	237.951	31/01/2008	306	282.912	17/03/2008	352	267.897
01/11/2007	215	194.880	17/12/2007	261	234.633	01/02/2008	307	270.207	18/03/2008	353	281.043
02/11/2007	216	182.175	18/12/2007	262	234.633	02/02/2008	308	283.080	19/03/2008	354	267.897
03/11/2007	217	209.811	19/12/2007	263	237.951	03/02/2008	309	275.919	20/03/2008	355	281.043
04/11/2007	218	186.942	20/12/2007	264	226.863	04/02/2008	310	280.098	21/03/2008	356	281.043
05/11/2007	219	194.880	21/12/2007	265	238.728	05/02/2008	311	250.068	22/03/2008	357	253.218
06/11/2007	220	182.175	22/12/2007	266	232.239	06/02/2008	312	277.284	23/03/2008	358	264.999
07/11/2007	221	209.811	23/12/2007	267	238.896	07/02/2008	313	277.284	24/03/2008	359	265.860
08/11/2007	222	186.942	24/12/2007	268	272.685	08/02/2008	314	240.765	25/03/2008	360	241.374
09/11/2007	223	235.578	25/12/2007	269	236.775	09/02/2008	315	277.284	26/03/2008	361	244.188
10/11/2007	224	194.880	26/12/2007	270	241.878	10/02/2008	316	240.765	27/03/2008	362	265.251
11/11/2007	225	182.175	27/12/2007	271	241.710	11/02/2008	317	239.589	28/03/2008	363	259.119
12/11/2007	226	209.811	28/12/2007	272	232.491	12/02/2008	318	239.841	29/03/2008	364	273.777
13/11/2007	227	186.942	29/12/2007	273	248.703	13/02/2008	319	237.447	30/03/2008	365	258.006
14/11/2007	228	225.855	30/12/2007	274	233.436	14/02/2008	320	251.181	31/03/2008	366	258.006
15/11/2007	229	197.106	31/12/2007	275	251.685	15/02/2008	321	235.998	01/04/2008	367	296.478
16/11/2007	230	240.870	01/01/2008	276	233.436	16/02/2008	322	276.780	02/04/2008	368	299.376

## Incrementos de esfuerzos Dovela 4-Inferior 4 (D4-I4) [Anexo 1]

Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )
03/04/2008	369	299.964	19/05/2008	415	239.148	04/07/2008	461	255.780	19/08/2008	507	358.575
04/04/2008	370	264.222	20/05/2008	416	241.290	05/07/2008	462	252.714	20/08/2008	508	354.564
05/04/2008	371	270.123	21/05/2008	417	269.346	06/07/2008	463	276.696	21/08/2008	509	331.443
06/04/2008	372	260.127	22/05/2008	418	247.338	07/07/2008	464	251.433	22/08/2008	510	323.862
07/04/2008	373	266.784	23/05/2008	419	247.338	08/07/2008	465	287.007	23/08/2008	511	333.249
08/04/2008	374	237.951	24/05/2008	420	277.200	09/07/2008	466	282.492	24/08/2008	512	338.436
09/04/2008	375	237.027	25/05/2008	421	269.955	10/07/2008	467	262.689	25/08/2008	513	338.436
10/04/2008	376	277.956	26/05/2008	422	241.290	11/07/2008	468	262.689	26/08/2008	514	335.895
11/04/2008	377	269.430	27/05/2008	423	277.200	12/07/2008	469	260.043	27/08/2008	515	310.632
12/04/2008	378	287.091	28/05/2008	424	269.955	13/07/2008	470	245.973	28/08/2008	516	304.752
13/04/2008	379	246.141	29/05/2008	425	233.520	14/07/2008	471	295.533	29/08/2008	517	306.117
14/04/2008	380	243.936	30/05/2008	426	235.305	15/07/2008	472	253.995	30/08/2008	518	306.117
15/04/2008	381	239.316	31/05/2008	427	225.330	16/07/2008	473	277.200	31/08/2008	519	306.117
16/04/2008	382	235.305	01/06/2008	428	212.457	17/07/2008	474	253.995	01/09/2008	520	303.135
17/04/2008	383	268.065	02/06/2008	429	214.410	18/07/2008	475	277.200	02/09/2008	521	303.387
18/04/2008	384	258.510	03/06/2008	430	209.643	19/07/2008	476	310.968	03/09/2008	522	295.281
19/04/2008	385	297.066	04/06/2008	431	206.577	20/07/2008	477	272.853	04/09/2008	523	312.249
20/04/2008	386	247.002	05/06/2008	432	210.672	21/07/2008	478	274.050	05/09/2008	524	298.515
21/04/2008	387	244.188	06/06/2008	433	243.327	22/07/2008	479	270.459	06/09/2008	525	296.730
22/04/2008	388	258.510	07/06/2008	434	233.436	23/07/2008	480	302.526	07/09/2008	526	302.694
23/04/2008	389	297.066	08/06/2008	435	233.436	24/07/2008	481	303.555	08/09/2008	527	303.807
24/04/2008	390	247.002	09/06/2008	436	236.775	25/07/2008	482	299.712	09/09/2008	528	320.439
25/04/2008	391	271.908	10/06/2008	437	229.950	26/07/2008	483	299.712	10/09/2008	529	307.986
26/04/2008	392	269.010	11/06/2008	438	243.411	27/07/2008	484	312.165	11/09/2008	530	311.325
27/04/2008	393	261.156	12/06/2008	439	239.757	28/07/2008	485	316.869	12/09/2008	531	331.191
28/04/2008	394	254.688	13/06/2008	440	243.936	29/07/2008	486	305.697	13/09/2008	532	335.706
29/04/2008	395	246.834	14/06/2008	441	240.681	30/07/2008	487	307.482	14/09/2008	533	352.359
30/04/2008	396	240.429	15/06/2008	442	235.137	31/07/2008	488	317.982	15/09/2008	534	365.652
01/05/2008	397	249.228	16/06/2008	443	237.363	01/08/2008	489	302.967	16/09/2008	535	330.078
02/05/2008	398	246.414	17/06/2008	444	234.297	02/08/2008	490	302.022	17/09/2008	536	308.763
03/05/2008	399	274.638	18/06/2008	445	241.794	03/08/2008	491	298.956	18/09/2008	537	305.340
04/05/2008	400	256.725	19/06/2008	446	241.374	04/08/2008	492	296.142	19/09/2008	538	312.081
05/05/2008	401	238.980	20/06/2008	447	241.458	05/08/2008	493	295.617	20/09/2008	539	299.712
06/05/2008	402	264.915	21/06/2008	448	240.765	06/08/2008	494	297.675	21/09/2008	540	323.694
07/05/2008	403	246.414	22/06/2008	449	239.064	07/08/2008	495	301.329	22/09/2008	541	323.001
08/05/2008	404	274.638	23/06/2008	450	239.757	08/08/2008	496	305.865	23/09/2008	542	300.069
09/05/2008	405	256.725	24/06/2008	451	227.304	09/08/2008	497	313.110	24/09/2008	543	295.701
10/05/2008	406	238.980	25/06/2008	452	243.852	10/08/2008	498	302.442	25/09/2008	544	289.737
11/05/2008	407	264.915	26/06/2008	453	247.254	11/08/2008	499	317.793	26/09/2008	545	306.201
12/05/2008	408	261.408	27/06/2008	454	235.305	12/08/2008	500	337.428	27/09/2008	546	301.938
13/05/2008	409	239.148	28/06/2008	455	292.131	13/08/2008	501	336.315	28/09/2008	547	293.328
14/05/2008	410	241.290	29/06/2008	456	258.951	14/08/2008	502	328.041	29/09/2008	548	298.347
15/05/2008	411	269.346	30/06/2008	457	266.868	15/08/2008	503	309.351	30/09/2008	549	286.755
16/05/2008	412	259.707	01/07/2008	458	260.736	16/08/2008	504	331.191	01/10/2008	550	291.102
17/05/2008	413	264.915	02/07/2008	459	255.360	17/08/2008	505	319.683	02/10/2008	551	285.894
18/05/2008	414	261.408	03/07/2008	460	247.863	18/08/2008	506	323.862	03/10/2008	552	283.605

## Incrementos de esfuerzos Dovela 4-Inferior 4 (D4-I4) [Anexo 1]

Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )	Fecha	No.	$\Delta$ Esf (kg/cm <sup>2</sup> )
04/10/2008	553	282.912	19/11/2008	599	338.793	04/01/2009	645	371.028	19/02/2009	691	382.200
05/10/2008	554	286.146	20/11/2008	600	342.111	05/01/2009	646	375.375	20/02/2009	692	385.959
06/10/2008	555	288.624	21/11/2008	601	310.884	06/01/2009	647	383.565	21/02/2009	693	384.174
07/10/2008	556	296.142	22/11/2008	602	381.171	07/01/2009	648	382.536	22/02/2009	694	399.189
08/10/2008	557	299.964	23/11/2008	603	310.884	08/01/2009	649	382.536	23/02/2009	695	399.189
09/10/2008	558	305.613	24/11/2008	604	345.786	09/01/2009	650	377.601	24/02/2009	696	388.185
10/10/2008	559	291.879	25/11/2008	605	338.268	10/01/2009	651	382.536	25/02/2009	697	376.488
11/10/2008	560	290.598	26/11/2008	606	338.793	11/01/2009	652	377.601	26/02/2009	698	396.459
12/10/2008	561	291.186	27/11/2008	607	338.793	12/01/2009	653	378.189	27/02/2009	699	396.018
13/10/2008	562	299.880	28/11/2008	608	342.111	13/01/2009	654	342.027	28/02/2009	700	384.258
14/10/2008	563	297.339	29/11/2008	609	310.884	14/01/2009	655	343.812	01/03/2009	701	375.207
15/10/2008	564	302.022	30/11/2008	610	381.171	15/01/2009	656	319.935	02/03/2009	702	380.247
16/10/2008	565	291.879	01/12/2008	611	320.712	16/01/2009	657	311.829	03/03/2009	703	387.660
17/10/2008	566	302.022	02/12/2008	612	316.512	17/01/2009	658	330.435	04/03/2009	704	387.660
18/10/2008	567	296.982	03/12/2008	613	343.308	18/01/2009	659	342.531	05/03/2009	705	400.806
19/10/2008	568	283.857	04/12/2008	614	316.512	19/01/2009	660	347.739	06/03/2009	706	390.138
20/10/2008	569	290.850	05/12/2008	615	343.308	20/01/2009	661	358.071	07/03/2009	707	398.244
21/10/2008	570	301.161	06/12/2008	616	324.198	21/01/2009	662	393.729	08/03/2009	708	387.744
22/10/2008	571	297.066	07/12/2008	617	331.527	22/01/2009	663	332.556	09/03/2009	709	391.083
23/10/2008	572	299.460	08/12/2008	618	339.717	23/01/2009	664	389.550	10/03/2009	710	391.083
24/10/2008	573	307.818	09/12/2008	619	352.443	24/01/2009	665	393.729	11/03/2009	711	391.083
25/10/2008	574	306.978	10/12/2008	620	352.443	25/01/2009	666	392.952	12/03/2009	712	385.014
26/10/2008	575	296.310	11/12/2008	621	379.134	26/01/2009	667	385.371	13/03/2009	713	389.109
27/10/2008	576	297.759	12/12/2008	622	333.501	27/01/2009	668	388.941	14/03/2009	714	387.660
28/10/2008	577	311.073	13/12/2008	623	345.786	28/01/2009	669	388.941	15/03/2009	715	385.791
29/10/2008	578	311.073	14/12/2008	624	339.717	29/01/2009	670	402.507	16/03/2009	716	385.791
30/10/2008	579	311.073	15/12/2008	625	352.443	30/01/2009	671	402.507	17/03/2009	717	388.857
31/10/2008	580	329.994	16/12/2008	626	352.443	31/01/2009	672	373.002	18/03/2009	718	388.857
01/11/2008	581	324.702	17/12/2008	627	379.134	01/02/2009	673	345.261	19/03/2009	719	384.006
02/11/2008	582	324.702	18/12/2008	628	333.501	02/02/2009	674	345.261	20/03/2009	720	384.006
03/11/2008	583	324.702	19/12/2008	629	345.786	03/02/2009	675	345.261	21/03/2009	721	384.006
04/11/2008	584	327.264	20/12/2008	630	383.901	04/02/2009	676	345.261	22/03/2009	722	404.985
05/11/2008	585	330.687	21/12/2008	631	353.451	05/02/2009	677	392.532	23/03/2009	723	389.109
06/11/2008	586	327.264	22/12/2008	632	315.252	06/02/2009	678	393.204	24/03/2009	724	389.109
07/11/2008	587	330.687	23/12/2008	633	374.010	07/02/2009	679	393.204	25/03/2009	725	389.109
08/11/2008	588	334.446	24/12/2008	634	383.901	08/02/2009	680	398.496	26/03/2009	726	387.156
09/11/2008	589	339.297	25/12/2008	635	353.451	09/02/2009	681	388.689	27/03/2009	727	373.758
10/11/2008	590	345.786	26/12/2008	636	315.252	10/02/2009	682	393.204	28/03/2009	728	373.758
11/11/2008	591	327.264	27/12/2008	637	377.433	11/02/2009	683	393.204			
12/11/2008	592	330.687	28/12/2008	638	372.729	12/02/2009	684	398.496			
13/11/2008	593	327.264	29/12/2008	639	345.786	13/02/2009	685	388.689			
14/11/2008	594	330.687	30/12/2008	640	345.786	14/02/2009	686	388.689			
15/11/2008	595	334.446	31/12/2008	641	366.345	15/02/2009	687	388.689			
16/11/2008	596	339.297	01/01/2009	642	371.028	16/02/2009	688	381.276			
17/11/2008	597	345.786	02/01/2009	643	371.028	17/02/2009	689	381.360			
18/11/2008	598	338.268	03/01/2009	644	371.028	18/02/2009	690	384.930			

# Anexo 2

Ajuste ARIMA (5,1,0) a 628 datos de los incrementos de esfuerzos D4-I4

No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
1	230.03	-	-	47	217.92	231.26	-13.34	93	183.54	191.43	-7.89
2	218.25	-	-	48	235.91	224.33	11.58	94	190.79	189.11	1.67
3	211.60	-	-	49	239.67	229.23	10.44	95	187.38	189.05	-1.67
4	206.75	-	-	50	224.05	235.92	-11.87	96	192.15	188.50	3.65
5	203.85	-	-	51	225.33	231.54	-6.21	97	202.57	190.88	11.69
6	221.84	-	-	52	222.10	226.52	-4.42	98	216.38	195.21	21.17
7	240.35	215.55	24.79	53	215.94	224.28	-8.34	99	191.21	203.64	-12.44
8	230.37	225.87	4.50	54	235.91	223.03	12.88	100	196.08	199.25	-3.17
9	247.00	227.82	19.18	55	239.59	227.98	11.61	101	193.18	195.49	-2.31
10	246.14	232.92	13.22	56	213.13	232.94	-19.81	102	216.38	194.96	21.42
11	231.32	237.99	-6.68	57	199.06	225.19	-26.13	103	191.21	205.67	-14.47
12	248.87	236.85	12.02	58	203.76	211.79	-8.03	104	196.08	201.56	-5.48
13	228.92	240.96	-12.04	59	210.76	208.10	2.65	105	193.18	196.06	-2.88
14	247.09	236.97	10.12	60	216.55	212.87	3.68	106	220.98	194.59	26.39
15	261.16	241.61	19.55	61	216.55	215.53	1.02	107	218.40	206.46	11.94
16	237.62	249.48	-11.87	62	239.59	213.86	25.72	108	218.86	213.70	5.16
17	229.01	245.46	-16.45	63	225.41	222.58	2.84	109	232.58	213.44	19.13
18	237.45	237.18	0.27	64	247.51	224.84	22.67	110	226.19	219.60	6.59
19	240.09	235.36	4.73	65	212.88	233.04	-20.16	111	225.33	223.09	2.24
20	238.14	240.77	-2.63	66	209.64	225.36	-15.72	112	213.57	225.09	-11.52
21	222.52	240.95	-18.44	67	220.98	217.91	3.07	113	206.75	219.56	-12.82
22	202.90	231.27	-28.36	68	209.98	219.85	-9.87	114	209.48	214.46	-4.99
23	222.35	218.58	3.77	69	219.70	218.10	1.60	115	223.04	213.37	9.67
24	242.40	220.22	22.18	70	206.83	219.30	-12.47	116	225.58	217.88	7.70
25	251.69	231.73	19.96	71	199.75	212.04	-12.29	117	215.94	221.85	-5.91
26	250.15	241.20	8.95	72	195.91	206.86	-10.95	118	232.85	218.26	14.59
27	232.76	242.21	-9.45	73	188.39	202.52	-14.13	119	231.90	222.18	9.73
28	218.51	235.65	-17.15	74	189.25	197.09	-7.84	120	238.04	227.26	10.77
29	213.05	228.84	-15.79	75	178.33	194.72	-16.39	121	238.73	232.61	6.12
30	213.05	223.81	-10.77	76	189.17	187.79	1.38	122	233.77	234.35	-0.58
31	213.05	221.39	-8.35	77	188.39	187.77	0.62	123	237.28	233.54	3.74
32	213.05	218.93	-5.88	78	189.25	188.48	0.78	124	236.33	235.47	0.86
33	213.05	215.69	-2.64	79	178.33	188.69	-10.36	125	227.89	236.06	-8.17
34	257.59	213.65	43.94	80	178.50	183.89	-5.39	126	237.11	233.41	3.70
35	223.04	230.75	-7.71	81	185.24	180.59	4.65	127	222.77	234.26	-11.49
36	226.44	229.91	-3.47	82	170.06	183.39	-13.33	128	233.10	230.14	2.96
37	241.71	225.63	16.08	83	176.11	179.10	-3.00	129	233.69	231.14	2.55
38	243.58	230.16	13.42	84	176.11	176.94	-0.83	130	231.13	232.31	-1.18
39	219.62	238.80	-19.18	85	174.24	176.14	-1.90	131	237.53	232.06	5.48
40	222.26	233.33	-11.06	86	193.60	176.29	17.31	132	234.47	233.91	0.56
41	225.16	224.40	0.76	87	182.26	183.01	-0.75	133	229.17	233.60	-4.43
42	217.31	225.69	-8.38	88	188.48	182.77	5.71	134	233.35	232.38	0.97
43	224.83	225.05	-0.22	89	195.30	184.48	10.82	135	234.47	232.18	2.29
44	238.90	224.25	14.64	90	185.16	188.10	-2.94	136	234.47	233.52	0.95
45	236.42	228.90	7.52	91	194.80	187.88	6.91	137	252.80	234.59	18.21
46	230.62	233.11	-2.49	92	193.52	190.73	2.79	138	243.08	241.28	1.80

No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
139	266.11	242.52	23.60	185	186.86	182.28	4.57	231	232.41	216.56	15.84
140	240.77	251.21	-10.45	186	184.04	185.32	-1.28	232	231.40	224.89	6.51
141	230.20	247.33	-17.12	187	188.66	184.00	4.66	233	244.19	226.58	17.61
142	224.05	239.43	-15.38	188	213.57	184.58	28.99	234	245.13	233.22	11.91
143	239.32	233.07	6.24	189	188.48	195.99	-7.52	235	245.13	237.61	7.52
144	221.24	236.74	-15.50	190	181.84	194.77	-12.93	236	240.51	243.22	-2.70
145	234.89	233.54	1.35	191	180.29	187.74	-7.45	237	277.62	240.70	36.92
146	237.03	231.41	5.62	192	181.76	183.31	-1.55	238	222.52	255.12	-32.60
147	240.51	233.04	7.47	193	178.08	184.95	-6.87	239	222.52	244.99	-22.47
148	218.34	236.66	-18.33	194	183.96	184.23	-0.27	240	222.52	232.69	-10.17
149	225.86	229.47	-3.61	195	177.66	182.29	-4.63	241	222.52	227.61	-5.09
150	213.82	225.59	-11.77	196	181.40	180.29	1.11	242	226.61	229.22	-2.60
151	213.82	222.57	-8.75	197	191.39	180.41	10.98	243	231.04	230.22	0.82
152	244.10	219.93	24.18	198	206.66	184.81	21.85	244	231.04	227.09	3.95
153	228.92	229.42	-0.50	199	206.66	194.12	12.54	245	231.04	228.77	2.27
154	223.71	230.12	-6.41	200	206.66	199.70	6.96	246	231.04	229.29	1.75
155	223.13	226.42	-3.29	201	206.66	201.01	5.65	247	222.01	229.72	-7.71
156	224.49	222.44	2.05	202	206.66	202.57	4.09	248	151.56	226.96	-75.41
157	222.77	224.61	-1.84	203	186.61	204.98	-18.37	249	229.26	196.83	32.43
158	228.14	226.20	1.95	204	188.92	198.69	-9.77	250	226.28	206.44	19.84
159	224.57	225.84	-1.27	205	205.63	193.80	11.83	251	235.22	220.68	14.55
160	241.04	225.21	15.83	206	205.63	199.15	6.48	252	233.02	228.85	4.17
161	237.95	231.27	6.68	207	227.72	203.83	23.89	253	239.06	224.74	14.33
162	235.41	234.56	0.85	208	219.28	212.58	6.70	254	236.67	226.21	10.46
163	238.39	234.47	3.92	209	194.02	213.93	-19.91	255	245.13	235.27	9.86
164	238.39	235.22	3.17	210	199.56	205.29	-5.72	256	234.80	238.93	-4.13
165	209.56	236.79	-27.24	211	199.56	201.62	-2.06	257	235.05	237.95	-2.90
166	187.30	227.13	-39.83	212	215.52	202.48	13.04	258	231.90	236.12	-4.21
167	184.91	209.43	-24.52	213	198.39	210.59	-12.21	259	231.90	234.55	-2.65
168	181.65	199.19	-17.54	214	194.46	205.41	-10.95	260	237.95	233.92	4.03
169	195.99	194.79	1.20	215	194.88	198.15	-3.27	261	234.63	236.07	-1.44
170	192.23	196.42	-4.19	216	182.18	196.42	-14.24	262	234.63	235.33	-0.70
171	195.49	193.63	1.86	217	209.81	192.14	17.67	263	237.95	234.72	3.23
172	189.59	192.52	-2.93	218	186.94	199.71	-12.76	264	226.86	235.48	-8.62
173	197.44	190.48	6.96	219	194.88	195.15	-0.27	265	238.73	232.49	6.24
174	213.57	193.01	20.56	220	182.18	193.75	-11.58	266	232.24	234.70	-2.46
175	199.75	202.44	-2.69	221	209.81	188.25	21.56	267	238.90	234.17	4.73
176	181.65	202.14	-20.49	222	186.94	196.86	-9.92	268	272.69	236.17	36.52
177	193.01	192.52	0.49	223	235.58	195.77	39.81	269	236.78	250.54	-13.77
178	185.66	190.78	-5.12	224	194.88	209.10	-14.22	270	241.88	246.37	-4.49
179	193.77	191.35	2.41	225	182.18	205.08	-22.91	271	241.71	242.19	-0.48
180	199.92	193.81	6.11	226	209.81	193.54	16.27	272	232.49	240.59	-8.10
181	185.49	195.03	-9.53	227	186.94	198.89	-11.95	273	248.70	240.31	8.40
182	176.97	190.70	-13.74	228	225.86	197.41	28.44	274	233.44	244.82	-11.38
183	175.27	184.52	-9.25	229	197.11	210.60	-13.49	275	251.69	239.01	12.67
184	181.57	179.96	1.60	230	240.87	203.16	37.71	276	233.44	243.81	-10.37

No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
277	251.69	239.84	11.84	323	257.59	254.45	3.14	369	299.96	287.06	12.90
278	258.51	243.68	14.83	324	284.11	257.23	26.88	370	264.22	292.17	-27.95
279	234.55	250.72	-16.17	325	273.19	266.83	6.36	371	270.12	277.41	-7.29
280	238.48	244.49	-6.01	326	252.29	269.28	-16.99	372	260.13	272.82	-12.69
281	238.48	240.58	-2.10	327	257.84	261.86	-4.02	373	266.78	271.55	-4.77
282	239.84	239.05	0.79	328	249.98	260.31	-10.32	374	237.95	271.57	-33.62
283	247.67	242.11	5.56	329	237.36	256.69	-19.33	375	237.03	258.17	-21.14
284	261.41	244.40	17.01	330	248.62	251.53	-2.91	376	277.96	246.48	31.47
285	234.05	249.96	-15.91	331	259.46	248.69	10.76	377	269.43	259.59	9.84
286	248.45	244.28	4.17	332	248.62	253.05	-4.43	378	287.09	266.87	20.22
287	244.19	243.70	0.49	333	259.46	252.67	6.78	379	246.14	273.68	-27.54
288	260.74	244.58	16.16	334	266.53	253.17	13.36	380	243.94	259.21	-15.27
289	245.30	252.85	-7.55	335	256.39	257.85	-1.46	381	239.32	251.44	-12.12
290	245.30	250.53	-5.23	336	260.65	258.88	1.77	382	235.31	249.08	-13.77
291	239.76	245.82	-6.06	337	256.39	258.81	-2.42	383	268.07	245.71	22.35
292	239.23	243.65	-4.41	338	197.27	257.22	-59.95	384	258.51	255.52	2.99
293	248.62	242.48	6.14	339	254.33	234.51	19.82	385	297.07	256.02	41.04
294	238.14	246.02	-7.88	340	241.63	239.66	1.97	386	247.00	271.08	-24.08
295	238.14	242.71	-4.57	341	247.51	244.50	3.00	387	244.19	261.18	-16.99
296	238.14	240.11	-1.97	342	236.94	247.71	-10.77	388	258.51	251.52	6.99
297	238.56	238.61	-0.05	343	280.01	239.54	40.47	389	297.07	255.03	42.03
298	239.76	239.32	0.43	344	231.40	252.31	-20.91	390	247.00	275.51	-28.51
299	239.76	240.06	-0.30	345	234.89	249.73	-14.84	391	271.91	268.09	3.82
300	240.60	239.29	1.30	346	237.20	240.16	-2.96	392	269.01	261.79	7.22
301	239.76	239.75	0.01	347	269.51	237.90	31.62	393	261.16	264.60	-3.44
302	266.78	239.72	27.06	348	269.51	253.34	16.17	394	254.69	266.99	-12.30
303	242.40	250.45	-8.05	349	237.36	263.58	-26.22	395	246.83	262.31	-15.47
304	234.97	248.65	-13.68	350	253.91	248.95	4.97	396	240.43	253.10	-12.67
305	274.39	241.34	33.05	351	246.58	247.42	-0.84	397	249.23	249.99	-0.77
306	282.91	253.01	29.90	352	267.90	249.17	18.73	398	246.41	249.75	-3.34
307	270.21	268.83	1.37	353	281.04	260.09	20.96	399	274.64	248.98	25.65
308	283.08	270.86	12.22	354	267.90	268.33	-0.44	400	256.73	258.74	-2.02
309	275.92	270.57	5.35	355	281.04	266.73	14.31	401	238.98	258.27	-19.29
310	280.10	272.92	7.18	356	281.04	271.04	10.00	402	264.92	248.79	16.13
311	250.07	278.60	-28.53	357	253.22	274.83	-21.61	403	246.41	253.48	-7.07
312	277.28	267.27	10.01	358	265.00	268.28	-3.28	404	274.64	253.66	20.98
313	277.28	269.37	7.91	359	265.86	265.48	0.38	405	256.73	263.30	-6.57
314	240.77	275.20	-34.43	360	241.37	266.19	-24.82	406	238.98	259.54	-20.56
315	277.28	262.33	14.95	361	244.19	258.77	-14.58	407	264.92	249.97	14.94
316	240.77	264.69	-23.93	362	265.25	250.73	14.52	408	261.41	255.21	6.20
317	239.59	256.19	-16.60	363	259.12	255.48	3.64	409	239.15	259.62	-20.47
318	239.84	251.02	-11.18	364	273.78	260.32	13.46	410	241.29	253.53	-12.24
319	237.45	244.79	-7.34	365	258.01	264.48	-6.48	411	269.35	244.60	24.75
320	251.18	242.19	8.99	366	258.01	259.80	-1.80	412	259.71	254.39	5.32
321	236.00	247.86	-11.86	367	296.48	258.67	37.81	413	264.92	261.02	3.90
322	276.78	241.44	35.34	368	299.38	274.50	24.88	414	261.41	260.79	0.61

No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
415	239.15	258.23	-19.09	461	255.78	257.49	-1.71	507	358.58	324.82	33.75
416	241.29	251.33	-10.04	462	252.71	254.84	-2.13	508	354.56	336.61	17.95
417	269.35	247.76	21.58	463	276.70	255.42	21.27	509	331.44	345.06	-13.62
418	247.34	256.67	-9.34	464	251.43	263.57	-12.13	510	323.86	339.61	-15.75
419	247.34	256.10	-8.76	465	287.01	259.08	27.92	511	333.25	329.27	3.98
420	277.20	250.23	26.97	466	282.49	268.05	14.44	512	338.44	331.90	6.54
421	269.96	258.21	11.74	467	262.69	275.15	-12.47	513	338.44	338.97	-0.54
422	241.29	266.19	-24.90	468	262.69	270.68	-8.00	514	335.90	338.83	-2.93
423	277.20	256.83	20.37	469	260.04	265.68	-5.63	515	310.63	335.31	-24.68
424	269.96	260.25	9.71	470	245.97	262.86	-16.89	516	304.75	324.60	-19.84
425	233.52	267.37	-33.85	471	295.53	259.65	35.88	517	306.12	316.18	-10.06
426	235.31	256.43	-21.12	472	254.00	272.83	-18.84	518	306.12	313.07	-6.95
427	225.33	243.32	-17.99	473	277.20	267.05	10.15	519	306.12	312.18	-6.06
428	212.46	236.08	-23.62	474	254.00	268.61	-14.61	520	303.14	309.76	-6.62
429	214.41	230.88	-16.47	475	277.20	261.49	15.71	521	303.39	305.31	-1.93
430	209.64	223.07	-13.43	476	310.97	268.16	42.81	522	295.28	304.02	-8.74
431	206.58	216.43	-9.85	477	272.85	288.39	-15.54	523	312.25	300.73	11.52
432	210.67	213.12	-2.44	478	274.05	282.24	-8.19	524	298.52	305.09	-6.58
433	243.33	211.23	32.10	479	270.46	276.01	-5.55	525	296.73	303.50	-6.77
434	233.44	223.75	9.69	480	302.53	271.27	31.25	526	302.69	300.01	2.68
435	233.44	229.42	4.02	481	303.56	287.81	15.74	527	303.81	300.18	3.62
436	236.78	229.04	7.73	482	299.71	297.64	2.07	528	320.44	302.47	17.97
437	229.95	230.05	-0.10	483	299.71	295.38	4.33	529	307.99	310.65	-2.67
438	243.41	231.35	12.06	484	312.17	294.81	17.35	530	311.33	309.07	2.25
439	239.76	237.81	1.95	485	316.87	301.75	15.12	531	331.19	308.76	22.43
440	243.94	238.56	5.38	486	305.70	310.78	-5.08	532	335.71	317.48	18.23
441	240.68	240.64	0.05	487	307.48	308.70	-1.22	533	352.36	326.66	25.70
442	235.14	240.24	-5.10	488	317.98	306.45	11.53	534	365.65	337.36	28.29
443	237.36	237.83	-0.47	489	302.97	311.21	-8.24	535	330.08	347.20	-17.13
444	234.30	238.04	-3.74	490	302.02	310.01	-7.99	536	308.76	340.69	-31.93
445	241.79	236.82	4.98	491	298.96	305.91	-6.96	537	305.34	326.12	-20.78
446	241.37	239.20	2.17	492	296.14	302.08	-5.93	538	312.08	317.28	-5.20
447	241.46	240.12	1.34	493	295.62	300.78	-5.17	539	299.71	319.18	-19.46
448	240.77	240.28	0.48	494	297.68	299.31	-1.64	540	323.69	313.88	9.81
449	239.06	240.12	-1.05	495	301.33	297.91	3.42	541	323.00	314.69	8.31
450	239.76	239.54	0.21	496	305.87	299.49	6.38	542	300.07	317.63	-17.56
451	227.30	240.05	-12.75	497	313.11	301.96	11.15	543	295.70	310.62	-14.92
452	243.85	235.08	8.77	498	302.44	306.19	-3.75	544	289.74	302.33	-12.59
453	247.25	238.04	9.21	499	317.79	304.68	13.11	545	306.20	297.12	9.08
454	235.31	242.76	-7.45	500	337.43	309.03	28.39	546	301.94	303.65	-1.72
455	292.13	240.24	51.89	501	336.32	321.17	15.14	547	293.33	304.02	-10.69
456	258.95	259.04	-0.09	502	328.04	328.83	-0.79	548	298.35	297.96	0.39
457	266.87	261.24	5.63	503	309.35	327.32	-17.97	549	286.76	296.37	-9.61
458	260.74	262.23	-1.49	504	331.19	317.90	13.29	550	291.10	293.04	-1.94
459	255.36	259.28	-3.92	505	319.68	323.72	-4.03	551	285.89	293.19	-7.29
460	247.86	259.05	-11.18	506	323.86	325.54	-1.68	552	283.61	290.13	-6.53



No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
553	282.91	287.40	-4.48	599	338.79	338.61	0.18
554	286.15	285.59	0.55	600	342.11	338.07	4.04
555	288.62	285.45	3.18	601	310.88	339.76	-28.88
556	296.14	287.29	8.85	602	381.17	329.30	51.87
557	299.96	290.53	9.43	603	310.88	348.61	-37.73
558	305.61	294.22	11.39	604	345.79	337.24	8.55
559	291.88	298.56	-6.68	605	338.27	337.39	0.88
560	290.60	295.82	-5.22	606	338.79	336.67	2.12
561	291.19	292.88	-1.69	607	338.79	339.34	-0.55
562	299.88	292.66	7.22	608	342.11	341.16	0.95
563	297.34	296.80	0.54	609	310.88	337.62	-26.74
564	302.02	297.79	4.23	610	381.17	329.38	51.79
565	291.88	298.15	-6.27	611	320.71	347.83	-27.12
566	302.02	295.30	6.72	612	316.51	341.20	-24.69
567	296.98	297.62	-0.64	613	343.31	328.60	14.71
568	283.86	298.39	-14.53	614	316.51	331.16	-14.65
569	290.85	292.63	-1.78	615	343.31	329.26	14.05
570	301.16	290.96	10.20	616	324.20	337.27	-13.08
571	297.07	295.45	1.61	617	331.53	328.30	3.22
572	299.46	297.93	1.53	618	339.72	329.62	10.09
573	307.82	297.16	10.66	619	352.44	334.31	18.14
574	306.98	300.12	6.85	620	352.44	341.43	11.02
575	296.31	304.02	-7.71	621	379.13	347.37	31.76
576	297.76	301.18	-3.43	622	333.50	357.91	-24.40
577	311.07	298.50	12.57	623	345.79	349.24	-3.46
578	311.07	304.14	6.94	624	339.72	345.52	-5.81
579	311.07	308.78	2.30	625	352.44	344.12	8.33
580	329.99	309.10	20.89	626	352.44	350.03	2.42
581	324.70	315.83	8.87	627	379.13	352.39	26.74
582	324.70	320.50	4.20	628	333.50	360.15	-26.65
583	324.70	322.29	2.41				
584	327.26	322.14	5.13				
585	330.69	324.67	6.02				
586	327.26	328.41	-1.14				
587	330.69	327.70	2.98				
588	334.45	328.46	5.99				
589	339.30	330.89	8.40				
590	345.79	334.75	11.03				
591	327.26	339.26	-11.99				
592	330.69	334.24	-3.55				
593	327.26	331.66	-4.40				
594	330.69	330.43	0.25				
595	334.45	331.87	2.57				
596	339.30	333.22	6.08				
597	345.79	334.75	11.03				
598	338.27	339.26	-0.99				

# Anexo 3

Ajuste ARIMA (5,1,0) a 100 datos de los incrementos de esfuerzos D4-I4

No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
1	345.79	-	-	47	345.26	358.79	-13.53	93	384.01	384.92	-0.92
2	383.90	-	-	48	345.26	357.00	-11.74	94	404.99	384.71	20.27
3	353.45	-	-	49	392.53	353.95	38.59	95	389.11	393.30	-4.19
4	315.25	-	-	50	393.20	367.11	26.09	96	389.11	392.64	-3.53
5	374.01	-	-	51	393.20	378.01	15.20	97	389.11	389.57	-0.46
6	383.90	-	-	52	398.50	382.83	15.67	98	387.16	388.42	-1.26
7	353.45	369.53	-16.08	53	388.69	385.91	2.78	99	373.76	389.13	-15.37
8	315.25	366.90	-51.65	54	393.20	387.60	5.61	100	373.76	384.19	-10.43
9	377.43	338.37	39.06	55	393.20	392.34	0.86				
10	372.73	350.06	22.67	56	398.50	392.86	5.63				
11	345.79	369.19	-23.40	57	388.69	395.67	-6.98				
12	345.79	360.95	-15.17	58	388.69	393.14	-4.45				
13	366.35	347.26	19.08	59	388.69	390.12	-1.43				
14	371.03	353.82	17.21	60	381.28	389.76	-8.49				
15	371.03	367.57	3.46	61	381.36	387.08	-5.72				
16	371.03	368.11	2.92	62	384.93	384.71	0.22				
17	371.03	366.00	5.03	63	382.20	384.35	-2.15				
18	375.38	367.84	7.53	64	385.96	384.16	1.80				
19	383.57	372.24	11.33	65	384.17	384.58	-0.41				
20	382.54	377.27	5.27	66	399.19	383.95	15.24				
21	382.54	379.66	2.88	67	399.19	390.03	9.15				
22	377.60	380.25	-2.64	68	388.19	394.44	-6.25				
23	382.54	378.71	3.82	69	376.49	391.52	-15.03				
24	377.60	380.41	-2.81	70	396.46	384.24	12.22				
25	378.19	380.20	-2.02	71	396.02	388.80	7.22				
26	342.03	379.28	-37.26	72	384.26	394.70	-10.45				
27	343.81	364.27	-20.46	73	375.21	390.69	-15.48				
28	319.94	354.35	-34.41	74	380.25	381.81	-1.57				
29	311.83	341.97	-30.14	75	387.66	380.46	7.20				
30	330.44	330.82	-0.38	76	387.66	385.91	1.75				
31	342.53	330.53	12.00	77	400.81	387.32	13.48				
32	347.74	335.64	12.10	78	390.14	391.30	-1.16				
33	358.07	341.03	17.04	79	398.24	390.44	7.80				
34	393.73	344.87	48.86	80	387.74	393.05	-5.31				
35	332.56	363.47	-30.92	81	391.08	391.25	-0.17				
36	389.55	353.67	35.88	82	391.08	391.25	-0.17				
37	393.73	364.09	29.64	83	391.08	391.88	-0.80				
38	392.95	378.41	14.54	84	385.01	391.53	-6.51				
39	385.37	387.90	-2.53	85	389.11	389.17	-0.06				
40	388.94	384.87	4.08	86	387.66	388.17	-0.51				
41	388.94	382.23	6.71	87	385.79	388.56	-2.77				
42	402.51	389.15	13.36	88	385.79	387.68	-1.89				
43	402.51	395.14	7.37	89	388.86	386.55	2.30				
44	373.00	398.40	-25.40	90	388.86	387.24	1.61				
45	345.26	387.47	-42.20	91	384.01	388.42	-4.42				
46	345.26	368.55	-23.29	92	384.01	386.48	-2.47				

# Anexo 4

Nuevo ajuste ARIMA (5,1,0) a 100 datos de los incrementos de esfuerzos D4-I4

No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$	No.	$Y_t$ (kg/cm <sup>2</sup> )	Ajuste ARIMA	Residual $a_t$
1	345.79	-	-	47	345.26	355.56	-13.53	93	384.01	386.23	-0.92
2	383.90	-	-	48	345.26	342.30	-11.74	94	404.99	384.02	20.27
3	353.45	-	-	49	392.53	344.13	38.59	95	389.11	397.38	-4.19
4	315.25	-	-	50	393.20	381.14	26.09	96	389.11	387.66	-3.53
5	374.01	-	-	51	393.20	376.80	15.20	97	389.11	392.68	-0.46
6	383.90	-	-	52	398.50	388.76	15.67	98	387.16	394.39	-1.26
7	353.45	353.27	-16.08	53	388.69	405.45	2.78	99	373.76	382.03	-15.37
8	315.25	351.64	-51.65	54	393.20	383.76	5.61	100	373.76	380.86	-10.43
9	377.43	353.00	39.06	55	393.20	394.56	0.86				
10	372.73	367.22	22.67	56	398.50	393.51	5.63				
11	345.79	349.40	-23.40	57	388.69	393.88	-6.98				
12	345.79	347.55	-15.17	58	388.69	392.17	-4.45				
13	366.35	372.04	19.08	59	388.69	390.97	-1.43				
14	371.03	352.91	17.21	60	381.28	390.54	-8.49				
15	371.03	358.16	3.46	61	381.36	381.13	-5.72				
16	371.03	371.23	2.92	62	384.93	385.19	0.22				
17	371.03	374.40	5.03	63	382.20	384.42	-2.15				
18	375.38	369.12	7.53	64	385.96	380.48	1.80				
19	383.57	373.35	11.33	65	384.17	386.39	-0.41				
20	382.54	379.45	5.27	66	399.19	384.35	15.24				
21	382.54	379.67	2.88	67	399.19	393.67	9.15				
22	377.60	382.96	-2.64	68	388.19	395.27	-6.25				
23	382.54	380.19	3.82	69	376.49	389.53	-15.03				
24	377.60	381.35	-2.81	70	396.46	387.01	12.22				
25	378.19	378.07	-2.02	71	396.02	393.03	7.22				
26	342.03	378.34	-37.26	72	384.26	388.34	-10.45				
27	343.81	355.42	-20.46	73	375.21	385.72	-15.48				
28	319.94	354.00	-34.41	74	380.25	387.43	-1.57				
29	311.83	330.96	-30.14	75	387.66	380.01	7.20				
30	330.44	315.70	-0.38	76	387.66	382.26	1.75				
31	342.53	334.59	12.00	77	400.81	384.59	13.48				
32	347.74	328.37	12.10	78	390.14	398.09	-1.16				
33	358.07	342.00	17.04	79	398.24	389.74	7.80				
34	393.73	356.42	48.86	80	387.74	397.13	-5.31				
35	332.56	378.03	-30.92	81	391.08	391.70	-0.17				
36	389.55	338.33	35.88	82	391.08	389.15	-0.17				
37	393.73	390.28	29.64	83	391.08	393.81	-0.80				
38	392.95	383.50	14.54	84	385.01	387.76	-6.51				
39	385.37	370.61	-2.53	85	389.11	388.99	-0.06				
40	388.94	406.44	4.08	86	387.66	389.43	-0.51				
41	388.94	383.55	6.71	87	385.79	387.26	-2.77				
42	402.51	387.69	13.36	88	385.79	385.40	-1.89				
43	402.51	396.55	7.37	89	388.86	388.13	2.30				
44	373.00	399.54	-25.40	90	388.86	387.22	1.61				
45	345.26	380.76	-42.20	91	384.01	387.66	-4.42				
46	345.26	366.74	-23.29	92	384.01	385.54	-2.47				