

UNIVERSITAT POLITÈCNICA DE CATALUNYA

DEPARTAMENT D'ESTRUCTURES A L'ARQUITECTURA
DEPARTAMENT D'ENGINYERIA DE LA CONSTRUCCIÓ

ESTUDIO EXPERIMENTAL DEL COMPORTAMIENTO
DE VIGAS DE HORMIGÓN ARMADO
DESCIMBRADAS A TEMPRANAS EDADES

ISABEL SERRÀ MARTÍN

Trabajo realizado como parte de los
requisitos exigidos para optar al grado
de Doctor.

Barcelona - Noviembre de 1994

Anejo V

**RESULTADOS DE LOS ENSAYOS
DE VIGAS A FLUENCIA**

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ENSAYO: FLUENCIA**VIGA: C11****EDAD DE PUESTA EN CARGA: 2 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	16.084	-0.1634	0.4726	-0.2227	0.3509	-0.2551	0.4343	-0.2202	0.3542
0.127	16.043	-0.1656	0.4715	-0.2263	0.3504	-0.2567	0.4341	-0.2236	0.3549
0.200	16.056	-0.1658	0.4617	-0.2269	0.3502	-0.2572	0.4348	-0.2240	0.3556
0.300	16.060	-0.1671	0.4739	-0.2284	0.3513	-0.2584	0.4338	-0.2257	0.3551
0.400	16.059	-0.1670	0.4640	-0.2303	0.3506	-0.2593	0.4332	-0.2257	0.3557
0.500	16.031	-0.1679	0.4856	-0.2318	0.3510	-0.2597	0.4327	-0.2281	0.3565
0.635	16.036	-0.1694	0.4726	-0.2337	0.3499	-0.2615	0.4312	-0.2301	0.3561
0.767	16.018	-0.1704	0.4831	-0.2354	0.3500	-0.2608	0.4327	-0.2290	0.3570
0.899	16.033	-0.1704	0.4782	-0.2362	0.3505	-0.2607	0.4323	-0.2311	0.3585
1.032	16.016	-0.1718	0.4876	-0.2379	0.3504	-0.2607	0.4316	-0.2322	0.3581
1.167	16.014	-0.1740	0.4824	-0.2404	0.3488	-0.2614	0.4304	-0.2344	0.3563
1.303	16.010	-0.1759	0.4775	-0.2421	0.3480	-0.2618	0.4293	-0.2357	0.3555
1.693	16.015	-0.1804	0.4752	-0.2465	0.3465	-0.2620	0.4273	-0.2414	0.3539
2.081	15.999	-0.1822	0.4673	-0.2500	0.3460	-0.2605	0.4278	-0.2448	0.3553
2.593	16.000	-0.1820	0.4750	-0.2505	0.3477	-0.2538	0.4299	-0.2442	0.3589
3.238	15.995	-0.1839	0.4855	-0.2530	0.3482	-0.2474	0.4298	-0.2456	0.3605
4.014	15.978	-0.1815	0.5048	-0.2509	0.3531	-0.2343	0.4362	-0.2429	0.3675
5.052	15.967	-0.1780	0.5388	-0.2482	0.3587	-0.2158	0.4424	-0.2386	0.3774
6.375	15.979	-0.1808	0.5585	-0.2525	0.3590	-0.1974	0.4432	-0.2382	0.3803
7.972	15.941	-0.1788	0.5751	-0.2521	0.3627	-0.1698	0.4485	-0.2309	0.3907
10.124	15.943	-0.1805	0.5801	-0.2553	0.3651	-0.1328	0.4502	-0.2245	0.3980
12.717	15.948	-0.1793	0.5739	-0.2555	0.3680	---	0.4536	-0.2134	0.4081
21.116	15.903	-0.2131	0.4879	-0.2913	0.3583	---	0.4359	-0.1719	0.4214
21.205	15.888	-0.2140	0.4930	-0.2923	0.3570	---	0.4362	-0.1719	0.4217
25.119	15.880	-0.2124	0.5979	-0.3056	0.2824	---	0.4227	-0.1305	0.4115
31.623	15.848	-0.2016	0.6357	-0.2983	0.2649	---	0.4407	---	0.4716
41.704	15.817	-0.2451	0.6178	-0.3459	0.2454	---	0.4195	---	0.5072
50.119	15.769	-0.2228	0.6648	-0.3296	0.1261	---	0.4720	---	0.6234
63.096	15.751	-0.2386	0.6665	-0.3529	-0.0153	---	0.5176	---	0.7771

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 23-9-92

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
79.433	15.796	-0.2214	0.6538	-0.3490	-1.3193	---	0.6170	---	---
100.000	15.661	-0.2028	0.7643	-0.3392	0.0762	---	0.7772	---	---
125.893	15.568	-0.2160	0.7759	-0.3630	0.2361	---	0.9057	---	---
158.489	15.591	-0.2711	0.7763	-0.4400	0.5424	---	---	---	---
199.527	15.549	-0.2699	0.8045	-0.4437	0.5709	---	---	---	---
258.615	15.480	-0.3299	0.8441	-0.4429	0.6157	---	---	---	---
311.593	15.477	-0.3285	0.8628	-0.4513	0.6281	---	---	---	---
424.585	15.455	-0.3560	0.8754	-0.4708	0.6429	---	---	---	---
519.204	15.334	-0.3634	0.8989	-0.4758	0.6652	---	---	---	---
630.957	15.285	-0.3767	0.8915	-0.5099	0.6555	---	---	---	---
793.642	15.281	-0.4076	0.9155	-0.5466	0.6744	---	---	---	---
1000.000	15.197	-0.4303	0.9393	-0.5808	0.6979	---	---	---	---
1258.926	15.124	-0.4638	0.9545	-0.6190	0.7040	---	---	---	---
1653.546	15.050	-0.5126	0.9541	-0.7157	0.6765	---	---	---	---
1982.143	15.026	-0.4918	1.0273	-0.5958	0.8219	---	---	---	---
1982.206	11.016	-0.4685	0.9550	-0.5628	0.7751	---	---	---	---
1982.317	6.865	-0.4435	0.8444	-0.5276	0.6973	---	---	---	---
1982.489	0.901	-0.4063	0.6790	-0.4707	0.5833	---	---	---	---

ENSAYO: FLUENCIA**VIGA: C11****EDAD DE PUESTA EN CARGA: 2 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	2.898	2.910	2.885	-0.2071	-0.2180	-0.1744	-0.2398	-0.2616	-0.2180
13.633	3.294	3.160	3.204	-0.2071	-0.2180	-0.1962	-0.2725	-0.2943	-0.2725
21.916	3.389	3.270	3.361	-0.2071	-0.2289	-0.2180	-0.2725	-0.3052	-0.2889
24.716	3.467	3.395	3.388	---	---	---	---	---	---
38.716	3.564	3.560	3.495	-0.2289	-0.2398	-0.2289	-0.3052	-0.3270	-0.3161
45.216	3.642	3.680	3.597	---	---	---	---	---	---
48.216	3.642	3.680	3.597	-0.2398	-0.2398	-0.2507	-0.3161	-0.3379	-0.3270
63.716	3.686	3.760	3.661	-0.2616	-0.2725	-0.2616	-0.3161	-0.3706	-0.3379
65.716	3.734	3.800	3.705	---	---	---	---	---	---
88.883	3.808	3.900	3.792	-0.2834	-0.2943	-0.2943	-0.3597	-0.3815	-0.3815
111.966	3.900	4.030	3.887	-0.3052	-0.3052	-0.3161	-0.3706	-0.3815	-0.3924
135.300	4.008	4.165	4.005	-0.3161	-0.3161	-0.3270	-0.3924	-0.4033	-0.4251
159.050	4.061	4.265	4.077	-0.3270	-0.3270	-0.3379	-0.4033	-0.4251	-0.4251
182.633	4.090	4.340	4.153	---	---	---	---	---	---
206.716	4.168	4.410	4.212	-0.3488	-0.3597	-0.3706	-0.4251	-0.4578	-0.4469
216.050	4.203	4.450	4.242	---	---	---	---	---	---
257.550	4.287	4.570	4.362	-0.3924	-0.3924	-0.4033	-0.4578	-0.4796	-0.5014
281.216	4.354	4.640	4.428	---	---	---	---	---	---
303.800	4.376	4.660	4.444	---	---	---	---	---	---
311.633	4.387	4.690	4.477	-0.4142	-0.4142	-0.4142	-0.4796	-0.5123	-0.5123
328.833	4.388	4.700	4.478	---	---	---	---	---	---
353.249	4.435	4.770	4.544	---	---	---	---	---	---
424.466	4.507	4.865	4.612	-0.4469	-0.4578	-0.4469	-0.5123	-0.5668	-0.5450
519.050	4.656	5.040	4.728	-0.4578	-0.4687	-0.4687	-0.5014	-0.5777	-0.5668
624.166	4.674	5.180	---	---	---	---	---	---	---
640.633	4.679	5.180	---	-0.5014	-0.5014	-0.4905	-0.5450	-0.6104	-0.5886
672.999	4.740	5.245	---	---	---	---	---	---	---
808.633	4.885	5.405	---	-0.5123	-0.5232	-0.5123	-0.5886	-0.6431	-0.6213
999.883	5.123	5.655	---	-0.5668	-0.5668	-0.5559	-0.6431	-0.6976	-0.6867
1287.883	5.296	5.910	---	-0.6104	-0.6104	-0.6213	-0.6649	-0.7521	-0.7303
1671.633	5.568	6.230	---	-0.6649	-0.6649	-0.6758	-0.7303	-0.8066	-0.7957
1982.332	5.738	6.450	---	-0.7085	-0.7085	-0.7085	-0.7521	-0.8611	-0.8284

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 23-9-92

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.1744	0.4033	0.4360	0.3597	0.1744	0.1090
0.2289	0.3924	0.4469	0.4142	0.1635	0.1199
0.2289	0.3924	0.4687	0.4415	0.1635	0.1253
---	---	---	---	---	---
0.2343	0.4142	0.4796	0.4469	0.1417	0.1199
---	---	---	---	---	---
0.2398	0.4142	0.4905	0.4578	0.1526	0.1199
0.2398	0.4360	0.4796	0.4578	0.1635	0.1199
---	---	---	---	---	---
0.2289	0.4251	0.4796	0.4687	0.1417	0.1090
0.2180	0.4251	0.4796	0.4905	0.1417	0.1090
0.2289	0.4360	0.4905	0.4905	0.1199	0.0981
0.2398	0.4469	0.5014	0.5014	0.1308	0.0981
---	---	---	---	---	---
0.2398	0.4469	0.5014	0.5014	0.1199	0.0981
---	---	---	---	---	---
0.2180	0.4360	0.5123	0.5123	0.0981	0.0872
---	---	---	---	---	---
---	---	---	---	---	---
0.2289	0.4360	0.5123	0.5232	0.0981	0.0763
---	---	---	---	---	---
---	---	---	---	---	---
0.2071	0.4251	0.5123	0.5232	0.0981	0.0763
0.2180	0.4251	0.5341	0.5232	0.0763	0.0654
---	---	---	---	---	---
0.2071	0.4251	0.5232	0.5123	0.0763	0.0545
---	---	---	---	---	---
0.2071	0.4251	0.5450	0.5341	0.0872	0.0545
0.1962	0.4142	0.5450	0.5232	0.0763	0.0327
0.1853	0.4142	0.5668	0.5232	0.0654	0.0218
0.1853	0.4142	0.5668	0.5232	0.0436	0.0000
0.1526	0.3924	0.5559	0.5232	0.0436	0.0000

ENSAYO: FLUENCIA**VIGA: C12****EDAD DE PUESTA EN CARGA: 4 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	17.956	-0.1712	---	-0.2330	0.4431	-0.3120	---	-0.2375	0.4089
0.100	17.923	-0.1762	---	-0.2390	0.4651	-0.3247	---	-0.2464	0.4208
0.200	17.894	-0.1778	---	-0.2320	0.4697	-0.3292	---	-0.2501	0.4246
0.300	17.881	-0.1780	---	-0.2310	0.4724	-0.3320	---	-0.2515	0.4291
0.400	17.879	-0.1808	---	-0.1600	0.4740	-0.3355	---	-0.2553	0.4286
0.500	17.864	-0.1819	---	---	0.4755	-0.3385	---	-0.2568	0.4302
0.600	17.856	-0.1821	---	---	0.4774	-0.3398	---	-0.2578	0.4088
0.700	17.835	-0.1818	---	---	0.4787	-0.3408	---	-0.2584	0.4183
0.800	17.833	-0.1826	---	---	0.4798	-0.3420	---	-0.2592	0.4198
0.900	17.826	-0.1833	---	---	0.4810	-0.3439	---	-0.2603	0.4210
1.000	17.829	-0.1827	---	---	0.4819	-0.3445	---	-0.2605	0.4234
1.312	17.815	-0.1828	---	---	0.4858	-0.3461	---	-0.2603	0.4285
1.585	17.814	-0.1833	---	---	0.4888	-0.3472	---	-0.2612	0.4309
1.995	17.788	-0.1826	---	---	0.4929	-0.3483	---	-0.2619	0.4350
2.512	17.780	-0.1806	---	---	0.4987	-0.3485	---	-0.2610	0.4406
3.162	17.767	-0.1781	---	---	0.5050	-0.3476	---	-0.2595	0.4456
3.981	17.762	-0.1796	---	---	0.5095	-0.3492	---	-0.2611	0.4532
5.012	17.739	-0.1807	---	---	0.5127	-0.3640	---	-0.2642	0.4539
6.310	17.721	-0.1801	---	---	0.5146	-0.4208	---	-0.2930	0.4300
7.944	17.711	-0.1853	---	---	0.5140	-0.4705	---	-0.3106	0.4162
10.000	17.687	-0.1874	---	---	0.5158	-0.5225	---	-0.3311	0.4006
12.590	17.684	-0.1888	---	---	0.5198	-0.5506	---	-0.3421	0.3940
15.849	17.655	-0.1939	---	---	0.5214	-0.5478	---	-0.3450	0.3922
19.953	17.651	-0.2108	---	---	0.5091	-0.5539	---	-0.3568	0.3755
25.119	17.680	-0.2151	---	---	0.5046	-0.5504	---	-0.3621	0.3649

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 25-9-92

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
31.623	17.703	-0.2114	---	---	0.5141	-0.5265	---	-0.3530	0.3628
39.811	17.574	-0.1770	---	---	0.5860	-0.4708	---	-0.3277	0.4065
50.119	17.506	-0.2012	---	---	0.5818	-0.4760	---	-0.3491	0.3963
63.096	17.446	-0.1818	---	---	0.6092	-0.4560	---	-0.3634	0.4201
79.433	17.332	-0.2235	---	---	0.6296	-0.4752	---	-0.3655	0.3875
100.000	17.322	-0.2574	---	---	0.6112	-0.4887	---	---	0.2932
125.893	17.286	-0.3027	---	---	0.5981	-0.5455	---	---	---
158.490	17.237	-0.3048	---	---	0.6230	-0.5123	---	---	---
215.106	17.118	-0.3527	---	---	0.5857	---	---	---	---
259.838	17.060	-0.3485	---	---	0.6023	---	---	---	---
309.781	17.093	-0.3496	---	---	0.6165	---	---	---	---
381.093	17.051	-0.3956	---	---	0.6046	---	---	---	---
500.858	16.971	-0.3738	---	---	0.6539	---	---	---	---
630.958	16.821	-0.4099	---	---	0.6839	---	---	---	---
813.182	16.759	-0.4946	---	---	0.6680	---	---	---	---
1004.114	16.716	-0.4976	---	---	0.7130	---	---	---	---
1244.885	16.602	-0.5044	---	---	0.7640	---	---	---	---
1610.039	16.465	-0.6040	---	---	0.8035	---	---	---	---
1962.487	16.390	-0.5660	---	---	0.8516	---	---	---	---
1962.543	12.412	-0.5368	---	---	0.7828	---	---	---	---
1962.684	8.277	-0.5116	---	---	0.7040	---	---	---	---
1962.836	2.255	-0.4380	---	---	0.5565	---	---	---	---

ENSAYO: FLUENCIA**VIGA: C12****EDAD DE PUESTA EN CARGA: 4 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	3.128	3.150	3.050	-0.1799	-0.1744	-0.1853	-0.2071	-0.1962	-0.2071
1.367	3.328	3.410	3.168	-0.1962	-0.1853	-0.1962	-0.1962	-0.1853	-0.2071
4.367	3.428	3.510	3.275	-0.2289	-0.2180	-0.2180	-0.2289	-0.2071	-0.2398
19.867	3.607	3.715	3.463	-0.2507	-0.2398	-0.2398	-0.2507	-0.2398	-0.2616
21.867	3.652	3.765	3.483	---	---	---	---	---	---
45.117	3.799	3.950	3.653	-0.2725	-0.2616	-0.2834	-0.2834	-0.2725	-0.3052
68.117	3.948	4.115	3.802	-0.2943	-0.2943	-0.3052	-0.3052	-0.2834	-0.3161
91.451	4.231	4.340	4.117	-0.3270	-0.3161	-0.3270	-0.3270	-0.3161	-0.3488
115.201	4.333	4.450	4.202	-0.3270	-0.3270	-0.3270	-0.3379	-0.3270	-0.3597
138.784	4.419	4.530	4.280	---	---	---	---	---	---
162.867	4.483	4.620	4.353	-0.3597	-0.3488	-0.3597	-0.3706	-0.3597	-0.3815
172.201	4.526	4.660	4.392	---	---	---	---	---	---
213.701	4.566	4.810	4.539	-0.4033	-0.3924	-0.4033	-0.4142	-0.4033	-0.4360
237.367	4.617	4.870	4.585	---	---	---	---	---	---
259.951	4.667	4.920	4.618	---	---	---	---	---	---
267.867	4.689	4.945	4.649	-0.4251	-0.4142	-0.4251	-0.4251	-0.4033	-0.4469
285.001	4.700	4.960	4.662	---	---	---	---	---	---
309.451	4.750	5.010	4.703	---	---	---	---	---	---
380.701	4.872	5.155	4.818	-0.4578	-0.4469	-0.4578	-0.4578	-0.4360	-0.4905
475.367	4.965	5.290	4.948	-0.4905	-0.4687	-0.4796	-0.4905	-0.4687	-0.5232
580.201	4.990	5.430	5.021	-0.5123	-0.5123	-0.5232	-0.5232	-0.5014	-0.5450
628.951	5.081	5.510	5.107	-0.5341	-0.5232	-0.5450	-0.5450	-0.5232	-0.5668
812.701	5.349	5.830	5.377	-0.5559	-0.5559	-0.5559	-0.5668	-0.5341	-0.5995
1003.617	5.487	5.990	5.498	-0.6104	-0.5995	-0.5995	-0.5995	-0.5886	-0.6431
1268.034	5.773	6.315	5.902	-0.6649	-0.6649	-0.6649	-0.6540	-0.6540	-0.6976
1627.951	6.083	6.650	6.086	-0.7303	-0.7194	-0.7194	-0.7194	-0.7085	-0.7412
1962.367	6.343	6.920	6.373	-0.7739	-0.7739	-0.7739	-0.7630	-0.7521	-0.7957

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 25-9-92

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.3270	-0.0218	0.3815	0.2943	0.2616	0.5995
0.3597	-0.0218	0.4033	0.3161	0.2834	0.5995
0.3706	-0.0327	0.4142	0.3270	0.2943	0.6322
0.3924	-0.0327	0.4251	0.3379	0.3052	0.6595
---	---	---	---	---	---
0.4033	-0.0545	0.4578	0.3379	0.3161	0.6976
0.4033	-0.0763	0.4469	0.3379	0.3270	0.7303
0.4142	-0.0872	0.4687	0.3379	0.3270	0.7412
0.4251	-0.0872	0.4796	0.3488	0.3270	0.7630
---	---	---	---	---	---
0.4360	-0.0872	0.4905	0.3488	0.3270	0.7739
---	---	---	---	---	---
0.4360	-0.1308	0.5014	0.3488	0.3379	0.8175
---	---	---	---	---	---
---	---	---	---	---	---
0.4360	-0.1417	0.5123	0.3488	0.3379	0.8284
---	---	---	---	---	---
---	---	---	---	---	---
0.4360	-0.1635	0.5123	0.3488	0.3379	0.8502
0.4469	-0.1744	0.5232	0.3488	0.3270	0.8611
0.4360	-0.1962	0.5123	0.3488	0.3270	0.8502
0.4251	-0.2289	0.5123	0.3270	0.3161	0.8720
0.4687	-0.2180	0.5559	0.3597	0.3488	0.9265
0.4687	-0.2398	0.5559	0.3597	0.3488	0.9156
0.4578	-0.2725	0.5559	0.3379	0.3270	0.9374
0.4469	-0.3161	0.5559	0.3379	0.3270	0.9483
0.4360	-0.3597	0.5450	0.3270	0.3270	0.9810

ENSAYO: FLUENCIA**VIGA: C13****EDAD DE PUESTA EN CARGA: 7 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	16.242	-0.1610	0.3187	-0.1824	---	-0.2335	0.3634	-0.2077	---
0.100	16.229	-0.1691	0.3323	-0.1900	---	-0.2415	0.3595	-0.2121	---
0.200	16.217	-0.1691	0.3381	-0.1916	---	-0.2422	0.4774	-0.2137	---
0.300	16.204	-0.1727	0.3390	-0.1928	---	-0.2435	0.5651	-0.2144	---
0.400	16.193	-0.1733	0.3358	-0.1935	---	-0.2441	0.7574	-0.2097	---
0.500	16.192	-0.1751	0.3414	-0.1950	---	-0.2448	0.8509	-0.2100	---
0.600	16.182	-0.1776	0.3420	-0.1969	---	-0.2454	0.9126	-0.2098	---
0.700	16.183	-0.1776	0.3443	-0.1969	---	-0.2450	0.9028	-0.2091	---
0.800	16.184	-0.1789	0.3451	-0.1980	---	-0.2449	0.8516	-0.2082	---
0.900	16.186	-0.1787	0.3470	-0.1978	---	-0.2437	---	-0.2066	---
1.000	16.185	-0.1791	0.3484	-0.1985	---	-0.2434	---	-0.2056	---
1.259	16.171	-0.1815	0.3492	-0.2004	---	-0.2427	---	-0.2021	---
1.585	16.170	-0.1829	0.3521	-0.2011	---	-0.2386	---	-0.2030	---
1.995	16.171	-0.1848	0.3545	-0.2028	---	-0.2361	---	-0.1979	---
2.512	16.160	-0.1809	0.3612	-0.2013	---	-0.2307	---	-0.1840	---
3.162	16.161	-0.1819	0.3637	-0.2033	---	-0.2260	---	-0.1766	---
3.981	16.170	-0.1812	0.3700	-0.2026	---	-0.2165	---	-0.1564	---
5.012	16.131	-0.1832	0.3733	-0.2038	---	-0.2046	---	-0.1383	---
6.310	16.133	-0.1855	0.3766	-0.2077	---	-0.1974	---	-0.1181	---
7.943	16.126	-0.1944	0.3729	-0.2110	---	---	---	---	---
10.000	16.124	-0.2028	0.3675	-0.2177	---	---	---	---	---
12.590	16.109	-0.2044	0.3715	-0.2143	---	---	---	---	---
15.849	16.100	-0.2040	0.3815	-0.2091	---	---	---	---	---
19.953	16.106	-0.2191	0.3625	-0.2239	---	---	---	---	---
25.119	16.134	-0.2234	0.3637	-0.2257	---	---	---	---	---

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 28-9-92

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
31.623	16.134	-0.2282	0.3676	-0.2300	---	---	---	---	---
39.811	16.116	-0.2327	0.3785	-0.2325	---	---	---	---	---
50.119	16.127	-0.2440	0.3687	-0.2452	---	---	---	---	---
63.096	16.092	-0.2523	0.3738	-0.2502	---	---	---	---	---
79.433	16.092	-0.2535	0.3835	-0.2514	---	---	---	---	---
99.009	16.072	-0.3562	0.3798	-0.2654	---	---	---	---	---
142.042	16.039	-0.3800	0.3997	-0.2989	---	---	---	---	---
158.490	16.047	-0.3694	0.4127	-0.2844	---	---	---	---	---
195.019	16.050	-0.3832	0.4151	-0.3062	---	---	---	---	---
236.719	16.031	-0.3958	0.4219	-0.3148	---	---	---	---	---
308.019	16.042	-0.4280	0.4140	-0.3469	---	---	---	---	---
402.655	16.042	-0.4458	0.4338	-0.3819	---	---	---	---	---
503.314	16.014	-0.4681	0.4055	-0.4969	---	---	---	---	---
677.066	16.014	-0.4907	0.4512	-0.5053	---	---	---	---	---
794.329	15.971	-0.5114	0.4664	-0.5136	---	---	---	---	---
1003.379	16.013	-0.5564	0.4581	-0.5335	---	---	---	---	---
1369.767	15.952	-0.5821	0.4640	-0.5855	---	---	---	---	---
1555.248	15.959	-0.6122	0.4543	-0.6151	---	---	---	---	---
1913.424	15.891	-0.6161	0.4763	-0.6192	---	---	---	---	---
1913.674	1.018	-0.4788	0.2490	-0.4756	---	---	---	---	---

ENSAYO: FLUENCIA**VIGA: C13****EDAD DE PUESTA EN CARGA: 7 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	3.056	3.130	3.080	-0.1635	-0.1744	-0.2398	-0.1853	-0.2071	-0.1962
0.483	3.153	3.240	3.175	-0.1853	-0.1744	-0.1962	-0.1962	-0.2071	-0.2071
17.367	3.405	3.590	3.414	-0.2507	-0.2507	-0.2616	-0.2507	-0.2725	-0.2725
41.117	3.575	3.810	3.574	-0.2725	-0.2616	-0.2834	-0.2616	-0.2943	-0.2943
64.783	3.689	3.950	3.663	---	---	---	---	---	---
88.867	3.793	4.070	3.774	-0.2943	-0.2943	-0.3052	-0.2943	-0.3161	-0.3270
98.117	3.860	4.145	3.831	---	---	---	---	---	---
139.617	4.018	4.320	3.996	-0.3597	-0.3379	-0.3706	-0.3488	-0.3706	-0.3706
163.283	4.060	4.390	4.030	-0.3706	-0.3488	-0.3706	-0.3597	-0.3815	-0.3815
185.867	4.110	4.440	4.065	---	---	---	---	---	---
193.900	4.137	4.470	4.097	-0.3815	-0.3706	-0.3815	-0.3706	-0.3924	-0.3924
210.983	4.141	4.490	4.117	-0.3924	-0.3706	-0.3924	-0.3706	-0.4033	-0.3924
235.400	4.191	4.555	4.167	---	---	---	---	---	---
306.783	4.337	4.710	4.280	-0.4251	-0.4033	-0.4142	-0.4033	-0.4360	-0.4251
401.283	4.490	4.880	4.441	-0.4578	-0.4251	-0.4469	-0.4360	-0.4796	-0.4578
506.033	4.655	5.110	4.630	-0.4905	-0.4687	-0.4796	-0.4796	-0.5014	-0.4687
555.033	4.753	5.220	4.737	---	---	---	---	---	---
690.867	4.955	5.445	4.930	-0.5341	-0.5123	-0.5232	-0.5123	-0.5450	-0.5123
833.533	5.242	5.650	5.106	-0.5886	-0.5559	-0.5777	-0.5668	-0.5995	-0.5559
1002.033	5.435	5.850	5.270	-0.5995	-0.5777	-0.5886	-0.5777	-0.6213	-0.5668
1368.200	5.725	6.280	5.600	-0.6867	-0.6540	-0.6649	-0.6649	-0.6976	-0.6431
1553.950	5.871	6.445	5.725	-0.7194	-0.6867	-0.6976	-0.7085	-0.7303	-0.6867
1912.283	6.121	6.735	5.810	-0.7739	-0.7303	-0.7412	-0.7630	-0.7957	-0.7194

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 28-9-92

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.2180	0.2507	0.5668	0.2616	0.4142	0.5232
0.2289	0.2834	0.6213	0.2725	0.4687	0.4796
0.2289	0.2834	0.6431	0.2725	0.5014	0.5014
0.2398	0.2943	0.6540	0.2834	0.5232	0.5341
---	---	---	---	---	---
0.2507	0.3052	0.6758	0.2943	0.5559	0.5668
---	---	---	---	---	---
0.2289	0.2943	0.6867	0.2834	0.5886	0.5777
0.2398	0.2943	0.6867	0.2834	0.5886	0.5777
---	---	---	---	---	---
0.2398	0.3052	0.6976	0.2834	0.5941	0.5995
0.2398	0.3052	0.6976	0.2834	0.5941	0.5995
---	---	---	---	---	---
0.2289	0.2943	0.7194	0.2834	0.6104	0.6104
0.2180	0.2943	0.7194	0.2725	0.6213	0.6104
0.2071	0.2834	0.7194	0.2616	0.6213	0.6104
---	---	---	---	---	---
0.2071	0.2943	0.7521	0.2725	0.6649	0.6540
0.1853	0.2725	0.7521	0.2507	0.6540	0.6540
0.2071	0.3052	0.7739	0.2725	0.6758	0.6758
0.1853	0.2834	0.7848	0.2616	0.6976	0.6867
0.1744	0.2834	0.7848	0.2507	0.6976	0.6867
0.1635	0.2725	0.7848	0.2507	0.6976	0.7085

ENSAYO: FLUENCIA**VIGA: C14****EDAD DE PUESTA EN CARGA: 28 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	23.160	-0.2598	0.3318	-0.1702	---	---	0.5751	---	---
0.100	23.107	-0.2654	0.3426	-0.1635	---	---	0.5849	---	---
0.200	23.070	-0.2668	0.3471	-0.1663	---	---	0.5899	---	---
0.300	23.067	-0.2689	0.3495	-0.1652	---	---	0.5935	---	---
0.400	23.044	-0.2721	0.3480	-0.1667	---	---	0.5966	---	---
0.500	23.038	-0.2733	0.3488	-0.1678	---	---	0.5971	---	---
0.600	23.024	-0.2745	0.3515	-0.1693	---	---	0.5930	---	---
0.700	23.021	-0.2752	0.3534	-0.1701	---	---	0.5971	---	---
0.800	23.000	-0.2763	0.3543	-0.1709	---	---	0.5972	---	---
0.900	22.987	-0.2774	0.3552	-0.1710	---	---	0.6012	---	---
1.000	22.997	-0.2788	0.3552	-0.1717	---	---	0.6019	---	---
1.259	22.983	-0.2814	0.3571	-0.1742	---	---	0.6027	---	---
1.585	22.973	-0.2816	0.3598	-0.1751	---	---	0.6037	---	---
1.995	22.955	-0.2835	0.3612	-0.1756	---	---	0.6049	---	---
2.512	22.928	-0.2845	0.3640	-0.1759	---	---	0.6087	---	---
3.162	22.913	-0.2854	0.3672	-0.1771	---	---	0.6128	---	---
3.982	22.905	-0.2881	0.3685	-0.1795	---	---	0.6184	---	---
5.012	22.882	-0.2898	0.3705	-0.1800	---	---	0.6163	---	---
6.310	22.852	-0.2898	0.3747	-0.1793	---	---	0.6231	---	---
7.944	22.832	-0.2925	0.3769	-0.1821	---	---	0.6207	---	---
10.000	22.797	-0.2942	0.3792	-0.1837	---	---	0.6293	---	---
12.589	22.789	-0.2965	0.3824	-0.1864	---	---	0.6345	---	---
15.849	22.743	-0.2976	0.3862	-0.1884	---	---	0.6389	---	---
19.953	22.743	-0.3048	0.3876	-0.1979	---	---	0.6362	---	---
25.119	22.711	-0.3126	0.3877	-0.2056	---	---	0.6401	---	---

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92

FECHA DE PUESTA EN CARGA: 19-10-92

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
31.623	22.658	-0.3119	0.3949	-0.2044	---	---	0.6475	---	---
39.811	22.625	-0.3121	0.4001	-0.2030	---	---	0.6558	---	---
51.482	22.525	-0.3077	0.4126	-0.1966	---	---	0.6798	---	---
63.096	22.463	-0.3155	0.4127	-0.2011	---	---	0.6902	---	---
75.915	22.497	-0.2804	0.4442	-0.1682	---	---	0.7345	---	---
100.000	22.421	-0.3411	0.4076	-0.2209	---	---	0.6917	---	---
172.975	22.305	-0.3742	0.4133	-0.2522	---	---	0.7055	---	---
172.981	22.306	-0.3743	0.4131	-0.2522	---	---	0.7051	---	---
194.800	22.269	-0.3815	0.4169	-0.2597	---	---	0.7139	---	---
260.165	22.157	-0.4295	0.4013	-0.2980	---	---	0.7016	---	---
316.228	22.079	-0.4059	0.4233	-0.2821	---	---	0.7347	---	---
403.286	22.083	-0.4395	0.4129	-0.3137	---	---	0.7304	---	---
499.290	22.030	-0.4584	0.4164	-0.3314	---	---	0.7393	---	---
630.957	21.892	-0.4800	0.4193	-0.3528	---	---	0.7488	---	---
865.682	21.793	-0.5182	0.4104	-0.3803	---	---	0.7568	---	---
1032.889	21.728	-0.5512	0.4048	-0.4048	---	---	0.7613	---	---
1414.313	21.672	-0.5154	0.4407	-0.4288	---	---	0.7737	---	---
1414.401	15.867	-0.4580	0.3623	-0.3755	---	---	0.6435	---	---
1414.563	8.370	-0.3870	0.2533	-0.3081	---	---	0.4732	---	---
1414.660	0.000	-0.2971	0.1613	-0.2428	---	---	0.3083	---	---
1415.022	0.000	-0.2920	0.1564	-0.2366	---	---	0.3018	---	---
1433.953	0.000	-0.2713	0.1489	-0.2240	---	---	0.2871	---	---

ENSAYO: FLUENCIA**VIGA: C14****EDAD DE PUESTA EN CARGA: 28 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	---	4.440	4.342	-0.2725	-0.2834	-0.2725	-0.2289	-0.2180	-0.2071
0.583	---	4.620	4.427	-0.2834	-0.2943	-0.2943	-0.2289	-0.2289	-0.2071
1.083	---	4.655	4.445	-0.2943	-0.3052	-0.2943	-0.2398	-0.2289	-0.2180
2.667	---	4.730	4.511	-0.2943	-0.3161	-0.2943	-0.2398	-0.2180	-0.2180
18.917	---	5.010	4.762	-0.3270	-0.3379	-0.3270	-0.2507	-0.2616	-0.2398
27.750	---	5.070	4.812	-0.3161	-0.3379	-0.3270	-0.2725	-0.2616	-0.2289
42.333	---	5.170	4.882	-0.3379	-0.3488	-0.3488	-0.2943	-0.2725	-0.2507
51.583	---	5.295	5.005	-0.3597	-0.3815	-0.3706	-0.3052	-0.2834	-0.2616
66.167	---	5.355	5.019	-0.3815	-0.4033	-0.3924	-0.3161	-0.2943	-0.2616
75.583	---	5.385	5.048	-0.3815	-0.4033	-0.3924	-0.3270	-0.2943	-0.2725
99.350	---	5.445	5.102	-0.3815	-0.3924	-0.4033	-0.3270	-0.2943	-0.2725
162.833	---	5.695	5.296	-0.4142	-0.4251	-0.4251	-0.3488	-0.3161	-0.2834
187.750	---	5.785	5.38	-0.4142	-0.4251	-0.4251	-0.3488	-0.3270	-0.2834
260.116	---	6.040	5.576	-0.4469	-0.4578	-0.4578	-0.3706	-0.3488	-0.3161
330.450	---	6.125	5.647	-0.4905	-0.5014	-0.5014	-0.4251	-0.3815	-0.3597
402.750	---	6.245	5.734	-0.5014	-0.5123	-0.5123	-0.4360	-0.3924	-0.3815
498.917	---	6.385	5.868	-0.5123	-0.5232	-0.5232	-0.4469	-0.4033	-0.3924
666.917	---	6.670	6.115	-0.5668	-0.5668	-0.5777	-0.4905	-0.4360	-0.4469
865.167	---	6.985	6.476	-0.6104	-0.6104	-0.6213	-0.5341	-0.4905	-0.4796
1050.833	---	7.185	6.55	-0.6540	-0.6649	-0.6649	-0.5777	-0.5232	-0.5123
1414.083	---	7.505	6.847	-0.7085	-0.7085	-0.7085	-0.6213	-0.5559	-0.5668

SERIE: PRIMERA

FECHA DE FABRICACIÓN: 21-9-92
FECHA DE PUESTA EN CARGA: 19-10-92

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.9592	0.5014	0.3924	1.0355	0.4687	0.4033
0.9810	0.5123	0.4142	1.0682	0.5123	0.4142
0.9919	0.5232	0.4251	1.0682	0.5123	0.4251
1.0028	0.5341	0.4360	1.1009	0.5341	0.4469
1.0355	0.5450	0.4469	1.1227	0.5341	0.4578
1.0355	0.5668	0.4578	1.1445	0.5559	0.4687
1.0464	0.5559	0.4469	1.1554	0.5450	0.4687
1.0573	0.5559	0.4469	1.1881	0.5341	0.4687
1.0682	0.5450	0.4469	1.1990	0.5341	0.4687
1.0791	0.5668	0.4469	1.2099	0.5450	0.4796
1.0900	0.5777	0.4578	1.2208	0.5559	0.4905
1.1118	0.5832	0.4633	1.2535	0.5668	0.5123
1.1336	0.5886	0.4796	1.2644	0.5777	0.5123
1.1554	0.6104	0.4905	1.2971	0.5995	0.5232
1.1445	0.5777	0.4578	1.2862	0.5668	0.5014
1.1445	0.5886	0.4578	1.3080	0.5777	0.5014
1.1554	0.6104	0.4687	1.3298	0.5995	0.5123
1.1663	0.5886	0.4578	1.3516	0.5886	0.5123
1.1881	0.5995	0.4469	1.3734	0.5995	0.5232
1.1772	0.5886	0.4360	1.3734	0.5886	0.5014
1.1881	0.5777	0.4360	1.3734	0.5886	0.5014

ENSAYO: FLUENCIA**VIGA: C21****EDAD DE PUESTA EN CARGA: 2 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	12.240	-0.1643	0.1474	-0.1572	---	---	0.2767	-0.2241	0.2271
0.229	12.203	-0.1708	0.1632	-0.1614	---	---	0.2840	-0.2356	0.2340
0.234	12.216	-0.1712	0.1635	-0.1617	---	---	0.2841	-0.2360	0.2341
0.300	12.204	-0.1723	0.1676	-0.1635	---	---	0.2838	-0.2382	0.2344
0.400	12.194	-0.1712	0.1766	-0.1628	---	---	0.2845	-0.2388	0.2368
0.500	12.208	-0.1720	0.1816	-0.1613	---	---	0.2887	-0.2395	0.2388
0.600	12.207	-0.1731	0.1885	-0.1625	---	---	0.2890	-0.2418	0.2383
0.700	12.195	-0.1728	0.1973	-0.1616	---	---	0.2906	-0.2422	0.2395
0.800	12.194	-0.1739	0.2031	-0.1627	---	---	0.2906	-0.2442	0.2392
0.900	12.207	-0.1754	0.2096	-0.1626	---	---	0.2916	-0.2448	0.2397
1.000	12.197	-0.1747	0.2169	-0.1611	---	---	0.2913	-0.2455	0.2405
1.259	12.186	-0.1754	0.2338	-0.1611	---	---	0.2916	-0.2486	0.2417
1.585	12.190	-0.1770	0.2541	-0.1595	---	---	0.2917	-0.2517	0.2421
1.995	12.162	-0.1778	0.2795	-0.1584	---	---	0.2924	-0.2544	0.2436
2.512	12.192	-0.1778	0.3113	-0.1550	---	---	0.2958	-0.2562	0.2462
3.163	12.178	-0.1778	0.3493	-0.1485	---	---	0.2993	-0.2581	0.2493
3.981	12.176	-0.1751	0.3973	-0.1441	---	---	0.3021	-0.2586	0.2536
5.012	12.172	-0.1720	0.4565	-0.1348	---	---	0.3059	-0.2591	0.2575
6.310	12.196	-0.1678	0.5279	-0.1259	---	---	0.3110	-0.2595	0.2626
7.944	12.153	-0.1620	0.6135	-0.1112	---	---	0.3168	-0.2581	0.2696
10.000	12.162	-0.1605	0.7102	-0.0973	---	---	0.3192	-0.2608	0.2719
12.590	12.150	-0.1574	0.8215	-0.0783	---	---	0.3240	-0.2634	0.2768
15.849	12.179	-0.1497	0.9381	-0.0551	---	---	0.3285	-0.2648	0.2840
19.953	12.155	-0.1651	1.0299	-0.0478	---	---	0.3208	-0.2801	0.2724
40.978	12.138	-0.1524	1.3231	0.0179	---	---	0.3405	-0.2851	0.2935

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
 FECHA DE PUESTA EN CARGA: 28-4-93

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
40.994	12.151	-0.1532	1.3231	0.0178	---	---	0.3405	-0.2851	0.2931
45.408	12.126	-0.1667	1.3378	0.0089	---	---	0.3155	-0.3102	0.2512
50.119	11.912	-0.1722	1.3586	0.0141	---	---	0.3160	-0.3117	0.2495
63.097	11.930	-0.1637	1.4188	0.0396	---	---	0.3347	---	0.2670
79.433	11.904	-0.1718	1.3493	0.0098	---	---	0.3397	---	0.2703
100.000	11.862	-0.1968	1.4130	0.0191	---	---	0.3344	---	0.2600
125.892	11.860	-0.2200	1.4491	0.0085	---	---	0.3265	---	0.2464
158.489	11.847	-0.2389	1.5075	0.0092	---	---	0.3408	---	0.2533
199.528	11.816	-0.3062	1.5376	-0.0381	---	---	0.3184	---	0.2188
251.189	11.779	-0.3557	1.5546	-0.0683	---	---	0.3196	---	0.2052
316.222	11.744	-0.3964	1.4668	-0.1072	---	---	0.3318	---	0.2001
398.111	11.762	-0.4285	1.5055	-0.1155	---	---	0.3541	---	0.2068
501.194	11.717	-0.4626	1.4773	-0.1595	---	---	0.3810	---	0.2183
630.944	11.702	-0.5466	1.4625	-0.2195	---	---	0.3605	---	0.1677
794.333	11.589	-0.6128	1.4685	-0.2544	---	---	0.3921	---	0.1524
1000.000	11.607	-0.6690	1.4634	-0.3054	---	---	0.4253	---	0.1493
1258.917	11.582	-0.7164	1.4528	-0.3593	---	---	0.4582	---	0.1465
1605.833	11.434	-0.7923	1.4211	-0.4323	---	---	0.4838	---	0.1286
1995.250	11.462	-0.8025	1.4465	-0.4366	---	---	0.5635	---	0.1679
2539.778	11.286	-0.8785	1.3935	-0.5252	---	---	0.5588	---	0.1257
3162.500	11.259	-0.8704	1.4273	-0.5114	---	---	0.6388	---	0.1741
4036.389	11.306	-0.8582	1.4720	-0.4796	---	---	0.7190	---	0.2282
5038.056	11.198	-0.8608	1.5117	-0.4582	---	---	0.7748	---	0.2878
6548.889	11.168	-0.9242	1.4930	-0.5109	---	---	0.8913	---	0.2629
6548.889	5.584	-0.8821	1.4402	-0.4723	---	---	1.2794	---	0.1986
6549.167	1.353	-0.8496	1.3956	-0.4395	---	---	1.2350	---	0.1389
6549.167	0.000	-0.8344	1.3642	-0.4258	---	---	1.2514	---	0.0942
6549.444	0.000	-0.8378	1.3593	-0.4286	---	---	0.8951	---	0.0884

ENSAYO: FLUENCIA**VIGA: C21****EDAD DE PUESTA EN CARGA: 2 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	2.288	2.550	2.282	-0.1962	-0.2071	-0.1962	-0.2180	-0.2071	-0.1962
0.817	2.443	2.720	2.418	-0.2180	-0.2398	-0.2180	-0.2289	-0.2180	-0.2071
2.950	2.512	2.800	2.511	-0.2398	-0.2507	-0.2289	-0.2398	-0.2180	-0.2289
17.783	2.733	3.060	2.744	-0.2834	-0.2834	-0.2834	-0.2616	-0.2507	-0.2616
22.450	2.806	3.130	2.806	-0.2834	-0.2834	-0.2834	-0.2616	-0.2507	-0.2616
41.717	3.045	3.300	2.974	-0.3052	-0.3052	-0.2943	-0.2616	-0.2507	-0.2943
52.567	3.061	3.430	3.069	-0.3052	-0.3161	-0.3052	-0.2725	-0.2725	-0.2943
65.117	3.114	3.490	3.134	-0.3161	-0.3270	-0.3161	-0.3052	-0.2725	-0.3052
90.883	3.263	3.650	3.270	-0.3597	-0.3597	-0.3597	-0.3379	-0.2943	-0.3379
120.133	3.378	3.790	3.382	-0.3706	-0.3706	-0.3706	-0.3488	-0.3052	-0.3597
163.750	3.572	4.020	3.680	-0.4033	-0.4142	-0.4033	-0.3706	-0.3597	-0.3815
186.533	3.679	4.125	3.783	-0.4251	-0.4360	-0.4251	-0.4033	-0.3706	-0.4033
266.700	3.995	4.480	4.005	-0.4469	-0.4687	-0.4469	-0.4360	-0.3924	-0.4360
308.200	4.113	4.640	4.135	-0.4687	-0.4905	-0.4687	-0.4687	-0.4360	-0.4469
475.550	4.492	5.040	4.514	-0.5450	-0.5777	-0.5341	-0.5341	-0.4905	-0.4905
523.417	4.579	5.140	4.599	---	---	---	---	---	---
548.333	4.580	5.180	4.600	-0.5668	-0.6213	-0.5668	-0.5668	-0.5341	-0.5341
887.867	5.002	5.700	5.053	-0.6431	-0.7085	-0.6322	-0.6213	-0.6104	-0.5886
1003.117	5.172	5.890	5.223	-0.6649	-0.7303	-0.6649	-0.6540	-0.6322	-0.5995
1316.367	5.407	6.175	5.458	-0.7303	-0.7957	-0.7194	-0.6758	-0.6976	-0.6431
1605.034	5.669	6.440	5.695	-0.7630	-0.8284	-0.7521	-0.7194	-0.7194	-0.6867
1990.334	5.890	6.700	5.913	-0.8175	-0.8829	-0.7957	-0.7739	-0.7848	-0.7521
2539.784	6.170	7.000	6.205	-0.8611	-0.9374	-0.8393	-0.8175	-0.8284	-0.7739
3162.567	6.341	7.200	6.370	-0.9156	-0.9919	-0.8938	-0.8502	-0.8938	-0.8175
4036.417	6.476	7.350	6.519	-0.9592	-1.0464	-0.9374	-0.8938	-0.9483	-0.8502
5038.200	6.655	7.540	6.703	-1.0246	-1.1227	-1.0137	-0.9810	-1.0464	-0.9265
6212.950	6.859	7.780	6.910	---	---	---	---	---	---
6548.783	6.959	7.890	---	-1.1009	-1.2099	-1.0900	-1.0355	-1.1227	-1.0137

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
FECHA DE PUESTA EN CARGA: 28-4-93

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.2289	0.1199	0.2180	0.2834	0.0218	0.3379
0.2180	0.1308	0.2289	0.2943	0.0109	0.3488
0.2180	0.1199	0.2289	0.3052	0.0000	0.3597
0.2398	0.1308	0.2398	0.3161	0.0000	0.3815
0.2507	0.1417	0.2507	0.3270	0.0109	0.3924
0.2507	0.1417	0.2616	0.3597	0.0000	0.4033
0.2616	0.1308	0.2616	0.3815	0.0000	0.4142
0.2616	0.1417	0.2616	0.3815	-0.0109	0.4142
0.2616	0.1308	0.2616	0.3924	-0.0218	0.4360
0.2616	0.1308	0.2725	0.4142	-0.0327	0.4360
0.2616	0.1199	0.2725	0.4251	-0.0654	0.4469
0.2616	0.1199	0.2834	0.4469	-0.0872	0.4578
0.2834	0.1308	0.3052	0.5014	-0.0981	0.5014
0.2834	0.1199	0.3052	0.5232	-0.1090	0.5123
0.2834	0.0981	0.3052	0.5341	-0.1635	0.5232
---	---	---	---	---	---
0.2834	0.0872	0.3161	0.5668	-0.1853	0.5341
0.2834	0.0763	0.3161	0.5886	-0.2289	0.5450
0.2834	0.0763	0.3379	0.5886	-0.2398	0.5668
0.2834	0.0545	0.3379	0.5777	-0.2616	0.5668
0.2834	0.0436	0.3379	0.6104	-0.2943	0.5886
0.2834	0.0218	0.3379	0.5995	-0.2616	0.5886
0.2616	0.0000	0.3488	0.5995	-0.3052	0.5995
0.2507	-0.0109	0.3379	0.5668	-0.3270	0.5668
0.1962	-0.0545	0.2943	0.5559	-0.3597	0.5559
0.1635	-0.0763	0.2943	0.5341	-0.4033	0.5341
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0.1308	-0.1199	0.2507	0.5232	-0.4469	0.5341

ENSAYO: FLUENCIA**VIGA: C22****EDAD DE PUESTA EN CARGA: 4 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	16.117	-0.2191	0.3697	---	---	-0.2792	0.3824	-0.2649	0.3227
0.100	16.073	-0.2232	0.3778	---	---	-0.2834	0.3885	-0.2688	0.3287
0.200	16.037	-0.2247	0.3816	---	---	-0.2865	0.3900	-0.2708	0.3307
0.300	16.040	-0.2263	0.3843	---	---	-0.2888	0.3912	-0.2731	0.3322
0.400	16.017	-0.2270	0.3867	---	---	-0.2903	0.3927	-0.2747	0.3330
0.500	16.010	-0.2282	0.3882	---	---	-0.2915	0.3939	-0.2758	0.3341
0.600	15.992	-0.2286	0.3897	---	---	-0.2922	0.3946	-0.2769	0.3349
0.700	16.008	-0.2293	0.3913	---	---	-0.2934	0.3954	-0.2781	0.3356
0.800	15.998	-0.2293	0.3928	---	---	-0.2942	0.3962	-0.2789	0.3368
0.900	15.983	-0.2301	0.3940	---	---	-0.2949	0.3966	-0.2796	0.3372
1.000	15.974	-0.2305	0.3951	---	---	-0.2957	0.3977	-0.2804	0.3380
1.259	15.958	-0.2317	0.3970	---	---	-0.2980	0.3981	-0.2823	0.3387
1.585	15.956	-0.2336	0.3982	---	---	-0.3011	0.3989	-0.2854	0.3391
1.995	15.919	-0.2347	0.4005	---	---	-0.3034	0.4004	-0.2877	0.3411
2.512	15.889	-0.2378	0.4024	---	---	-0.3073	0.4008	-0.2912	0.3411
3.163	15.877	-0.2398	0.4040	---	---	-0.3111	0.4012	-0.2950	0.3411
3.981	15.850	-0.2421	0.4066	---	---	-0.3149	0.4024	-0.2984	0.3419
5.013	15.847	-0.2456	0.4089	---	---	-0.3207	0.4020	-0.3034	0.3415
6.310	15.816	-0.2491	0.4116	---	---	-0.3261	0.4020	-0.3092	0.3419
7.944	15.824	-0.2451	0.4219	---	---	-0.3266	0.4067	-0.3089	0.3485
10.000	15.775	-0.2419	0.4323	---	---	-0.3275	0.4113	-0.3094	0.3535
12.590	15.761	-0.2400	0.4412	---	---	-0.3298	0.4148	-0.3121	0.3581
15.849	15.724	-0.2381	0.4477	---	---	-0.3348	0.4167	-0.3163	0.3608
19.253	15.698	-0.2319	0.4539	---	---	-0.3386	0.4187	-0.3190	0.3639
25.119	15.624	-0.2341	0.4534	---	---	-0.3515	0.4188	-0.3303	0.3652

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
 FECHA DE PUESTA EN CARGA: 30-4-93

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
31.622	15.558	-0.2283	0.4634	---	---	-0.3600	0.4203	-0.3376	0.3686
39.811	15.543	-0.2164	0.4807	---	---	-0.3647	0.4261	-0.3403	0.3771
50.119	15.488	-0.2328	0.4733	---	---	-0.3907	0.4185	-0.3632	0.3699
63.097	15.412	-0.2239	0.4906	---	---	-0.3980	0.4239	-0.3682	0.3806
79.433	15.319	-0.2438	0.4788	---	---	-0.4282	0.4145	-0.3954	0.3727
100.000	15.241	-0.2538	0.4829	---	---	-0.4601	0.4092	-0.4217	0.3720
140.783	15.154	-0.2722	0.5058	---	---	-0.5009	0.4124	-0.4535	0.3867
158.489	15.120	-0.2852	0.5151	---	---	-0.5206	0.4134	-0.4683	0.3963
199.528	15.048	-0.3155	0.5140	---	---	-0.5677	0.4052	-0.5045	0.4034
251.189	14.990	-0.3174	0.5393	---	---	-0.5858	0.4161	-0.5109	---
316.222	14.927	-0.3485	0.5479	---	---	-0.6274	0.4083	-0.5379	---
398.111	14.911	-0.3742	0.5709	---	---	-0.6628	0.4135	-0.5566	---
501.194	14.875	-0.4166	0.5838	---	---	-0.7151	0.4125	-0.5847	---
630.944	14.800	-0.5023	0.5365	---	---	-0.7899	0.3817	-0.6308	---
794.333	14.743	-0.5522	0.5448	---	---	-0.8456	0.3798	-0.6510	---
1000.000	14.779	-0.5837	0.5669	---	---	-0.8845	0.3922	-0.6494	---
1258.917	14.687	-0.6453	0.5445	---	---	-0.9425	0.3883	-0.6228	---
1584.889	14.619	-0.7527	0.5084	---	---	-1.0298	0.3803	-0.6527	---
2017.111	14.455	-0.7754	0.5278	---	---	-1.0466	0.4104	-0.5753	---
2494.389	14.454	-0.8482	0.4997	---	---	-1.0993	0.4203	-0.5959	---
3117.222	14.506	-0.8463	0.5248	---	---	-1.1035	0.4488	-0.5767	---
3991.111	14.609	-0.8333	0.5703	---	---	-1.1112	0.4719	-0.5766	---
4992.778	14.634	-0.8396	0.6159	---	---	-1.1322	0.4790	-0.5995	---
6502.778	14.711	-0.9247	0.6130	---	---	-1.2234	0.4578	-0.6653	---
6503.056	12.367	-0.8518	0.4880	---	---	-1.1285	0.3198	-0.5689	---
6503.056	11.537	-0.8128	0.4142	---	---	-1.0758	0.2338	-0.5158	---
6503.333	0.103	-0.7900	0.3652	---	---	-1.0471	0.1723	-0.4901	---

ENSAYO: FLUENCIA**VIGA: C22****EDAD DE PUESTA EN CARGA: 4 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	2.743	3.190	2.852	-0.2507	-0.0327	-0.1526	-0.1635	-0.1962	-0.1962
1.683	3.010	3.380	3.035	-0.2616	-0.0654	-0.1744	-0.1744	-0.1962	-0.2398
7.083	3.172	3.620	3.204	-0.3488	-0.0981	-0.1962	-0.2071	-0.2180	-0.2616
19.666	3.325	3.790	3.356	-0.3924	-0.1090	-0.2180	-0.2289	-0.2507	-0.3052
24.166	3.428	3.910	3.429	-0.5123	-0.0436	-0.2398	-0.2398	-0.2616	-0.3161
45.416	3.569	4.050	3.553	-0.5777	-0.0654	-0.2725	-0.2507	-0.2834	-0.3488
74.666	3.744	4.290	3.757	-0.5995	-0.0654	-0.2834	-0.2725	-0.3052	-0.3597
92.950	3.844	4.400	3.856	-0.6213	-0.0654	-0.2943	-0.3052	-0.3161	-0.3815
118.283	3.965	4.560	3.989	-0.6540	-0.0872	-0.3052	-0.3161	-0.3270	-0.4142
165.333	4.259	4.850	4.253	-0.6976	-0.1199	-0.3488	-0.3597	-0.3488	-0.4578
198.000	4.422	5.035	4.388	-0.7194	-0.1308	-0.3706	-0.3815	-0.3924	-0.4687
262.733	4.612	5.280	4.614	-0.7630	-0.1744	-0.4033	-0.4251	-0.4142	-0.5123
338.016	4.832	5.510	4.786	-0.7957	-0.2071	-0.4360	-0.4578	-0.4360	-0.5450
430.083	5.073	5.770	4.971	-0.8502	-0.2725	-0.4796	-0.5014	-0.4796	-0.5777
477.950	5.161	5.880	5.063	---	---	---	---	---	---
502.833	5.163	5.920	5.065	-0.8829	-0.3052	-0.5123	-0.5341	-0.5014	-0.6213
621.500	5.276	6.140	5.222	-0.9265	-0.3488	-0.5341	-0.5668	-0.5450	-0.6431
797.416	5.650	6.470	5.474	-0.9701	-0.3924	-0.5777	-0.6104	-0.5886	-0.6867
1006.333	5.943	6.790	5.763	-1.0355	-0.4687	-0.6322	-0.6758	-0.6431	-0.7412
1270.883	6.177	7.050	5.992	-1.0791	-0.5232	-0.6649	-0.7085	-0.6976	-0.7521
1590.750	6.487	7.405	6.289	-1.1227	-0.5559	-0.7085	-0.7521	-0.7194	-0.7848
2017.250	6.703	7.685	6.509	-1.1990	-0.6322	-0.7739	-0.8066	-0.7848	-0.8502
2494.583	7.020	8.030	6.824	-1.2208	-0.6758	-0.8066	-0.8502	-0.8175	-0.8938
3117.333	7.207	8.245	6.990	-1.2862	-0.7303	-0.8611	-0.8829	-0.8720	-0.9483
3991.167	7.356	8.460	7.154	-1.3407	-0.7848	-0.9156	-0.9483	-0.9374	-1.0028
4992.950	7.556	8.650	7.347	-1.4279	-0.8720	-0.9919	-1.0355	-1.0137	-1.0791
6167.666	7.800	8.920	7.600	---	---	---	---	---	---
6502.833	7.886	9.020	---	-1.5369	-0.9701	-1.0791	-1.1336	-1.0900	-1.1554

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
FECHA DE PUESTA EN CARGA: 30-4-93

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.2616	0.2398	0.2725	0.3488	0.1090	0.3924
0.2834	0.2507	0.2943	0.3706	0.1090	0.3924
0.2834	0.2616	0.2943	0.3815	0.0981	0.3924
0.2834	0.2616	0.3161	0.3815	0.0981	0.4142
0.2725	0.2507	0.3052	0.3815	0.0981	0.4142
0.2725	0.2398	0.3052	0.3815	0.0981	0.4251
0.2943	0.2616	0.3052	0.3924	0.0981	0.4469
0.2943	0.2507	0.3161	0.3815	0.0872	0.4469
0.2834	0.2507	0.3052	0.3815	0.0654	0.4469
0.3052	0.2507	0.3161	0.3924	0.0654	0.4796
0.3052	0.2507	0.3161	0.4033	0.0545	0.5014
0.3052	0.2398	0.3161	0.4033	0.0436	0.5014
0.2943	0.2398	0.3161	0.4033	0.0327	0.5232
0.3161	0.2289	0.3052	0.4142	0.0109	0.5450
---	---	---	---	---	---
0.3052	0.2180	0.2943	0.4033	0.0000	0.5450
0.3052	0.2180	0.2943	0.4251	-0.0109	0.5668
0.3052	0.2071	0.2834	0.4251	-0.0218	0.5559
0.3052	0.1853	0.2725	0.3815	-0.0763	0.5559
0.2943	0.1853	0.2616	0.4033	-0.0763	0.5668
0.3052	0.1853	0.2725	0.4142	-0.0654	0.5886
0.2725	0.1526	0.2507	0.4033	-0.0981	0.5559
0.2943	0.1526	0.2507	0.4033	-0.1090	0.5777
0.2616	0.1199	0.2180	0.3924	-0.1308	0.5450
0.2398	0.0872	0.1853	0.3597	-0.1635	0.5123
0.2071	0.0436	0.1526	0.3379	-0.1853	0.5123
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0.1417	-0.0218	0.0981	0.2943	-0.2398	0.4360

ENSAYO: FLUENCIA**VIGA: C23****EDAD DE PUESTA EN CARGA: 7 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	18.430	-0.2197	0.2995	-0.2407	0.1843	-0.2848	0.4153	-0.2597	0.4405
0.100	18.377	-0.2213	0.3030	-0.2434	0.1959	-0.2860	0.4227	-0.2643	0.4436
0.200	18.362	-0.2236	0.3057	-0.2446	0.2013	-0.2902	0.4238	-0.2670	0.4451
0.300	18.337	-0.2260	0.3065	-0.2473	0.2044	-0.2937	0.4242	-0.2694	0.4466
0.400	18.322	-0.2280	0.3080	-0.2488	0.2075	-0.2961	0.4246	-0.2713	0.4474
0.500	18.310	-0.2291	0.3092	-0.2500	0.2106	-0.2976	0.4261	-0.2729	0.4485
0.600	18.282	-0.2303	0.3092	-0.2511	0.2129	-0.2992	0.4269	-0.2729	0.4505
0.700	18.284	-0.2319	0.3084	-0.2523	0.2148	-0.3015	0.4264	-0.2748	0.4508
0.800	18.271	-0.2330	0.3096	-0.2539	0.2168	-0.3034	0.4265	-0.2767	0.4505
0.900	18.271	-0.2342	0.3103	-0.2542	0.2190	-0.3046	0.4272	-0.2779	0.4504
1.000	18.269	-0.2349	0.3111	-0.2550	0.2206	-0.3057	0.4277	-0.2790	0.4509
1.259	18.245	-0.2365	0.3127	-0.2562	0.2257	-0.3081	0.4288	-0.2814	0.4524
1.585	18.219	-0.2399	0.3139	-0.2581	0.2315	-0.3111	0.4300	-0.2837	0.4536
1.996	18.215	-0.2403	0.3173	-0.2597	0.2381	-0.3134	0.4316	-0.2852	0.4560
2.512	18.203	-0.2418	0.3197	-0.2604	0.2462	-0.3161	0.4331	-0.2879	0.4575
3.163	18.175	-0.2437	0.3228	-0.2620	0.2544	-0.3192	0.4343	-0.2902	0.4591
3.982	18.152	-0.2457	0.3259	-0.2635	0.2628	-0.3231	0.4354	-0.2930	0.4606
5.012	18.135	-0.2461	0.3316	-0.2628	0.2752	-0.3239	0.4389	-0.2941	0.4636
6.310	18.127	-0.2455	0.3378	-0.2616	0.2891	-0.3247	0.4427	-0.2949	0.4678
7.944	18.096	-0.2463	0.3467	-0.2612	0.3026	-0.3267	0.4454	-0.2965	0.4720
10.000	18.067	-0.2491	0.3552	-0.2624	0.3153	-0.3310	0.4469	-0.2996	0.4746
12.589	18.042	-0.2515	0.3652	-0.2620	0.3307	-0.3349	0.4499	-0.3023	0.4780
15.849	17.989	-0.2546	0.3757	-0.2620	0.3474	-0.3395	0.4530	-0.3058	0.4823
18.286	17.967	-0.2614	0.3797	-0.2659	0.3535	-0.3467	0.4530	-0.3146	0.4778
25.119	17.877	-0.2805	0.3802	-0.2825	0.3608	-0.3727	0.4483	-0.3400	0.4703

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
 FECHA DE PUESTA EN CARGA: 3-5-93

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
31.622	17.840	-0.2798	0.4022	-0.2694	0.3865	-0.3745	0.4573	-0.3397	0.4822
39.811	17.778	-0.2840	0.4237	-0.2701	0.4084	-0.3804	0.4633	-0.3413	0.4927
66.250	17.636	-0.3224	0.4414	-0.2752	0.4297	-0.4258	0.4637	-0.3863	0.4857
66.256	17.610	-0.3224	0.4414	-0.2752	0.4297	-0.4258	0.4637	-0.3863	0.4857
79.433	17.529	-0.3381	0.4531	-0.2784	0.4388	-0.4441	0.4685	-0.4041	0.4877
100.000	17.469	-0.3576	0.4699	-0.2912	0.4440	-0.4712	0.4691	-0.4275	0.4960
125.892	17.324	-0.3747	0.4905	-0.2947	0.4635	-0.4912	0.4774	-0.4429	0.5071
158.489	17.184	-0.3979	0.5125	-0.2993	0.4847	-0.5128	0.4863	-0.4602	0.5187
199.528	17.080	-0.4173	0.5209	-0.3122	0.4880	-0.5352	0.4876	-0.4795	0.5210
251.189	16.995	-0.4405	0.5669	-0.3111	0.5147	-0.5564	0.4988	-0.4946	0.5368
316.222	16.867	-0.4796	0.5614	-0.3386	0.5180	-0.6009	0.5022	-0.5392	0.5333
398.111	16.736	-0.5049	0.5554	-0.3473	0.5196	-0.6250	0.5150	-0.5550	0.5530
502.722	16.659	-0.5586	0.5186	-0.4044	0.4901	-0.6906	0.5034	-0.6174	0.5127
630.944	16.331	-0.5792	0.5677	-0.3875	0.5564	-0.6909	0.5564	-0.6376	0.5542
794.333	16.214	-0.6223	0.5482	-0.4139	0.5506	-0.7262	0.5625	-0.6762	0.5637
1004.306	16.053	-0.6757	0.5400	-0.4459	0.5578	-0.7613	0.5797	-0.7142	0.5904
1268.306	15.855	-0.7191	0.5153	-0.4724	0.5341	-0.7853	0.5849	-0.7506	0.6024
1585.111	15.739	-0.7755	0.5024	-0.5196	0.5179	-0.8047	0.6066	-0.7947	0.6245
1942.583	15.510	-0.8079	0.4728	-0.5479	0.4878	-0.7843	0.6030	-0.8095	0.6481
2517.056	15.323	-0.8564	0.4476	-0.5897	0.4152	-0.7509	0.6236	-0.8372	0.6321
3042.778	15.267	-0.8813	0.4359	-0.6016	0.4023	-0.7055	0.6306	-0.8296	0.5867
3916.389	15.209	-0.9250	0.4236	-0.6383	0.3937	-0.7014	0.6205	-0.8544	0.5883
4918.333	14.967	-0.9887	0.4055	-0.6867	0.3593	-0.7430	0.5914	-0.8875	0.5804
6427.778	14.952	-1.0543	0.3460	-0.7761	0.3432	-0.8245	0.5776	-0.9552	0.2401
6427.778	7.317	-0.9920	0.2627	-0.7050	0.2905	-0.7454	0.4594	-0.8795	0.1254
6428.056	1.666	-0.9407	0.1943	-0.6492	0.2420	-0.6758	0.3578	-0.8137	0.0142
6428.056	0.000	-0.9117	0.1660	-0.6258	0.2156	-0.6338	0.3073	-0.7824	-0.0355

ENSAYO: FLUENCIA**VIGA: C23****EDAD DE PUESTA EN CARGA: 7 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	3.356	3.810	3.378	-0.2725	-0.2507	-0.2398	-0.2289	-0.2507	-0.2507
1.533	3.424	4.010	3.578	-0.2834	-0.2616	-0.2507	-0.2507	-0.2834	-0.2725
4.083	3.527	4.110	3.662	-0.2943	-0.2725	-0.2725	-0.2834	-0.2943	-0.2725
18.283	3.724	4.340	3.880	-0.3379	-0.2943	-0.2943	-0.3052	-0.3270	-0.3161
43.616	3.952	4.610	4.113	-0.3706	-0.3270	-0.3379	-0.3488	-0.3597	-0.3379
66.500	4.123	4.810	4.298	-0.4033	-0.3597	-0.3597	-0.3706	-0.3924	-0.3706
90.533	4.283	5.000	4.462	-0.4251	-0.3815	-0.3815	-0.3924	-0.4033	-0.3924
123.333	4.448	5.190	4.630	-0.4578	-0.4033	-0.3924	-0.4142	-0.4360	-0.4142
162.817	4.614	5.380	4.797	-0.4687	-0.4251	-0.4251	-0.4251	-0.4578	-0.4360
188.067	4.664	5.450	4.860	-0.4905	-0.4578	-0.4360	-0.4360	-0.4687	-0.4469
263.350	4.889	5.700	5.069	-0.5232	-0.5014	-0.4796	-0.4687	-0.5123	-0.4796
355.433	5.114	5.965	5.294	-0.5559	-0.5450	-0.5123	-0.5123	-0.5559	-0.5232
403.116	5.211	6.080	5.391	-0.5777	-0.5668	-0.5450	-0.5232	-0.5668	-0.5232
504.983	5.332	6.370	5.584	-0.6213	-0.6104	-0.5559	-0.5450	-0.5886	-0.5559
619.033	5.596	6.660	5.828	-0.6649	-0.6649	-0.6213	-0.5995	-0.6431	-0.5995
813.283	5.872	6.980	6.111	-0.7085	-0.7194	-0.6758	-0.6322	-0.6867	-0.6322
1003.283	6.098	7.250	6.360	-0.7630	-0.7739	-0.7303	-0.6758	-0.7412	-0.6758
1268.367	6.296	7.470	6.545	-0.7957	-0.8066	-0.7630	-0.7085	-0.7848	-0.6976
1585.200	6.645	7.850	6.878	-0.8611	-0.8720	-0.8175	-0.7521	-0.8393	-0.7412
2091.617	6.861	8.100	7.112	-0.8938	-0.9047	-0.8611	-0.7848	-0.8829	-0.7739
2517.200	7.062	8.340	7.319	-0.9483	-0.9592	-0.9156	-0.8175	-0.9265	-0.8284
3044.433	7.231	8.560	7.499	-0.9919	-1.0028	-0.9592	-0.8611	-0.9701	-0.8502
3916.716	7.398	8.760	7.666	-1.0246	-1.0464	-0.9919	-0.9047	-1.0137	-0.9047
4918.533	7.581	8.930	7.858	-1.1118	-1.1227	-1.0791	-0.9483	-1.0900	-0.9592
6093.149	7.802	9.180	8.078	---	---	---	---	---	---
6427.733	7.884	9.270	---	-1.1990	-1.2208	-1.1663	-1.0464	-1.1772	-1.0464

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
FECHA DE PUESTA EN CARGA: 3-5-93

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.4796	0.3270	0.1744	0.5232	0.1417	0.4251
0.5014	0.3161	0.1853	0.5450	0.1526	0.4360
0.5014	0.3161	0.1853	0.5559	0.1635	0.4469
0.5232	0.3270	0.1962	0.5559	0.1635	0.4578
0.5341	0.3270	0.2071	0.5777	0.1744	0.4687
0.5450	0.3270	0.1962	0.5777	0.1744	0.4796
0.5559	0.3379	0.1853	0.5995	0.1744	0.5014
0.5668	0.3379	0.1962	0.6104	0.1744	0.5123
0.5886	0.3379	0.1853	0.6213	0.1744	0.5232
0.5886	0.3379	0.1962	0.6213	0.1744	0.5232
0.6104	0.3488	0.1853	0.6322	0.1744	0.5341
0.6104	0.3379	0.1853	0.6431	0.1635	0.5450
0.6213	0.3379	0.1744	0.6540	0.1635	0.5559
0.6431	0.3488	0.1744	0.6649	0.1635	0.5668
0.6431	0.3270	0.1526	0.6649	0.1526	0.5668
0.6322	0.3052	0.1199	0.6867	0.1526	0.5777
0.6322	0.2725	0.1090	0.6867	0.1308	0.5777
0.6540	0.2507	0.0872	0.6976	0.1308	0.5886
0.6540	0.2616	0.0763	0.7194	0.1090	0.6104
0.6758	0.2616	0.0872	0.7194	0.1090	0.6213
0.6540	0.2180	0.0654	0.7194	0.0981	0.6104
0.6213	0.1962	0.0436	0.6867	0.0763	0.5777
0.5995	0.1635	0.0218	0.6649	0.0436	0.5668
0.5559	0.1199	-0.0109	0.6540	0.0327	0.5668
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0.5341	0.0763	-0.0436	0.6213	-0.0218	0.5668

ENSAYO: FLUENCIA**VIGA: C24****EDAD DE PUESTA EN CARGA: 28 días****MEDICIONES ELECTRÓNICAS**

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
0.000	21.031	-0.2986	---	-0.2422	0.2157	-0.3631	0.5969	-0.3298	0.5753
0.100	20.990	-0.3040	---	-0.2477	0.2087	-0.3686	0.6043	-0.3356	0.5819
0.200	20.964	-0.3083	---	-0.2489	0.2083	-0.3733	0.6082	-0.3384	0.5842
0.300	20.950	-0.3103	---	-0.2504	0.2075	-0.3760	0.6106	-0.3411	0.5862
0.400	20.923	-0.3126	---	-0.2516	0.2067	-0.3776	0.6125	-0.3434	0.5873
0.500	20.923	-0.3134	---	-0.2528	0.2062	-0.3792	0.6140	-0.3438	0.5888
0.600	20.910	-0.3153	---	-0.2539	0.2067	-0.3811	0.6145	-0.3462	0.5893
0.700	20.896	-0.3169	---	-0.2551	0.2071	-0.3818	0.6164	-0.3469	0.5908
0.800	20.896	-0.3177	---	-0.2559	0.2071	-0.3838	0.6172	-0.3485	0.5916
0.900	20.896	-0.3188	---	-0.2563	0.2075	-0.3850	0.6180	-0.3497	0.5924
1.000	20.883	-0.3200	---	-0.2570	0.2080	-0.3861	0.6188	-0.3508	0.5929
1.259	20.883	-0.3211	---	-0.2593	0.2076	-0.3888	0.6204	-0.3532	0.5944
1.585	20.870	-0.3238	---	-0.2616	0.2082	-0.3915	0.6224	-0.3555	0.5957
1.996	20.856	-0.3261	---	-0.2638	0.2087	-0.3942	0.6243	-0.3586	0.5977
2.512	20.829	-0.3289	---	-0.2655	0.2093	-0.3973	0.6266	-0.3613	0.5995
3.163	20.816	-0.3309	---	-0.2667	0.2112	-0.3997	0.6297	-0.3633	0.6018
3.981	20.816	-0.3336	---	-0.2682	0.2132	-0.4028	0.6321	-0.3664	0.6038
5.012	20.803	-0.3344	---	-0.2687	0.2157	-0.4044	0.6363	-0.3676	0.6084
6.310	20.789	-0.3340	---	-0.2688	0.2199	-0.4045	0.6413	-0.3680	0.6134
7.944	20.789	-0.3349	---	-0.2693	0.2231	-0.4065	0.6459	-0.3696	0.6179
10.000	20.749	-0.3369	---	-0.2703	0.2263	-0.4082	0.6500	-0.3715	0.6220
12.590	20.749	-0.3408	---	-0.2741	0.2268	-0.4132	0.6528	-0.3762	0.6244
15.849	20.722	-0.3468	---	-0.2792	0.2263	-0.4196	0.6562	-0.3824	0.6275
19.953	20.651	-0.3689	---	-0.3051	0.2095	-0.4458	0.6479	-0.4052	0.6186
25.119	20.652	-0.3839	---	-0.3149	0.2076	-0.4599	0.6524	-0.4191	0.6231

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
FECHA DE PUESTA EN CARGA: 24-5-93

t - j [horas]	LECTURA CÉLULA [kN]	DEFORMACIÓN DEL HORMIGÓN [mm/m]				DEFORMACIÓN DE LA ARMADURA LONGITUDINAL [mm/m]			
		GH1	GH2	GH3	GH4	GA1	GA2	GA3	GA4
31.622	20.585	-0.3782	---	-0.3074	0.2227	-0.4547	0.6673	-0.4137	0.6387
39.811	20.571	-0.3813	---	-0.3087	0.2286	-0.4579	0.6761	-0.4164	0.6487
50.119	20.550	-0.4007	---	-0.3198	0.2283	-0.4767	0.6717	-0.4345	0.6403
63.097	20.400	-0.3921	---	-0.3113	0.2416	-0.4690	0.6925	-0.4280	0.6643
79.433	20.470	-0.4133	---	-0.3399	0.2276	-0.4992	0.6907	-0.4525	0.6655
100.000	20.377	-0.4128	---	-0.3341	0.2444	-0.4919	0.7152	-0.4453	0.6951
125.892	20.363	-0.4404	---	-0.3575	0.2343	-0.5202	0.7095	-0.4719	0.6886
158.489	20.321	-0.4424	---	-0.3603	0.2447	-0.5276	0.7104	-0.4784	0.6920
199.528	20.269	-0.4802	---	-0.3903	0.2342	-0.5628	0.7080	-0.5105	0.6932
251.189	20.269	-0.4933	---	-0.3960	0.2455	-0.5724	0.7216	-0.5197	0.7105
316.222	20.218	-0.5312	---	-0.4313	0.2353	-0.6154	0.7170	-0.5588	0.7095
398.111	20.184	-0.5419	---	-0.4330	0.2556	-0.6213	0.7340	-0.5639	0.7317
501.194	20.119	-0.5933	---	-0.4835	0.2323	-0.6735	0.7231	-0.6123	0.7261
630.944	20.066	-0.6208	---	-0.4947	0.2444	-0.6967	0.7376	-0.6358	0.7455
655.750	20.066	-0.6173	---	-0.4912	0.2494	-0.6936	0.7411	-0.6323	0.7509
1000.000	19.992	-0.7112	---	-0.5708	0.2240	-0.7826	0.7484	-0.7144	0.7770
1365.889	19.854	-0.7526	---	-0.6131	0.2217	-0.8209	0.7753	-0.7475	0.8202
1587.806	19.733	-0.8060	---	-0.6581	0.1966	-0.8785	0.7539	-0.8000	0.7984
2012.722	19.694	-0.8415	---	-0.6865	0.2011	-0.9010	0.7737	-0.8219	0.8377
2538.306	19.652	-0.8555	---	-0.6988	0.2137	-0.9146	0.7873	-0.8361	0.8663
3220.278	19.608	-0.8993	---	-0.7357	0.1948	-0.9555	0.7807	-0.8809	0.8585
4221.667	19.709	-0.9625	---	-0.7943	0.1668	-1.0158	0.7753	-0.9415	0.8577
4941.667	19.651	-0.9929	---	-0.8285	0.1518	-1.0446	0.7647	-0.9687	0.8534
5922.778	19.601	-1.1586	---	-0.8810	0.1358	-1.1152	0.7490	-1.0288	0.8341
5923.056	7.746	-1.0409	---	-0.7716	0.0160	-0.9733	0.5185	-0.8931	0.6080
5923.056	1.698	-0.9794	---	-0.7194	-0.0623	-0.8904	0.3785	-0.8143	0.4721
5923.333	0.000	-0.9389	---	-0.6843	-0.0793	-0.8381	0.3104	-0.7642	0.4235
5925.000	0.000	-0.9342	---	-0.6804	-0.0766	-0.8230	0.3069	-0.7550	0.4136

ENSAYO: FLUENCIA**VIGA: C24****EDAD DE PUESTA EN CARGA: 28 días****MEDICIONES MANUALES**

t - j [horas]	FLECHA [mm]			EXTENSÓMETROS SUPERIORES [mm/m]					
	R1	R2	R3	SF1	SF2	SF3	SD1	SD2	SD3
0.000	4.332	4.850	4.199	-0.3270	-0.3597	-0.3052	-0.1853	-0.2616	-0.3161
0.550	4.470	5.050	4.349	-0.3379	-0.3706	-0.3379	-0.2616	-0.2725	-0.3379
2.200	4.601	5.175	4.452	-0.3488	-0.3924	-0.3488	-0.2725	-0.2834	-0.3379
4.434	4.652	5.260	4.524	-0.3597	-0.4033	-0.3597	-0.2943	-0.3052	-0.3597
17.950	4.875	5.540	4.736	-0.3924	-0.4360	-0.3924	-0.3161	-0.3270	-0.3924
18.533	4.879	5.560	4.769	---	---	---	---	---	---
25.200	4.967	5.640	4.869	-0.4142	-0.4469	-0.4142	-0.3379	-0.3379	-0.4033
42.383	5.114	5.790	5.004	-0.4360	-0.4687	-0.4360	-0.3597	-0.3597	-0.4251
114.617	5.489	6.240	5.419	-0.5014	-0.5341	-0.4796	-0.4142	-0.4142	-0.4796
194.783	5.763	6.540	5.647	-0.5232	-0.5559	-0.5014	-0.4360	-0.4360	-0.5014
263.533	5.895	6.680	5.784	-0.5450	-0.5886	-0.5232	-0.4578	-0.4578	-0.5232
309.033	6.017	6.860	5.930	-0.5777	-0.6213	-0.5668	-0.4796	-0.4796	-0.5450
427.367	6.267	7.110	6.160	-0.6322	-0.6649	-0.6104	-0.5123	-0.5232	-0.5886
499.067	6.393	7.240	6.264	-0.6540	-0.6867	-0.6322	-0.5450	-0.5559	-0.6104
691.867	6.616	7.500	6.501	-0.6649	-0.7194	-0.6540	-0.5777	-0.5886	-0.6431
932.367	6.933	7.845	6.799	-0.7194	-0.7848	-0.7085	-0.6213	-0.6322	-0.6867
1011.784	7.049	7.960	6.899	-0.7194	-0.7848	-0.7085	-0.6322	-0.6322	-0.6867
1365.950	7.365	8.310	7.197	-0.7957	-0.8502	-0.7739	-0.6867	-0.6867	-0.7521
1587.400	7.490	8.460	7.331	-0.8175	-0.8720	-0.7957	-0.6867	-0.6976	-0.7521
2012.784	7.750	8.760	7.580	-0.8611	-0.9265	-0.8393	-0.7521	-0.7630	-0.8175
2540.200	7.987	9.040	7.806	-0.9047	-0.9810	-0.8938	-0.7957	-0.8066	-0.8720
3220.367	8.150	9.200	7.948	-0.9592	-1.0464	-0.9483	-0.8502	-0.8720	-0.9156
4221.650	8.387	9.480	8.186	-1.0355	-1.1227	-1.0246	-0.9156	-0.9374	-0.9810
4941.617	8.483	9.600	8.298	-1.0791	-1.1663	-1.0682	-0.9592	-0.9810	-1.0246
5588.851	8.643	9.800	8.455	---	---	---	---	---	---
5922.700	8.889	9.960	---	-1.1336	-1.2208	-1.1118	-1.0028	-1.0464	-1.0791

SERIE: SEGUNDA

FECHA DE FABRICACIÓN: 26-4-93
FECHA DE PUESTA EN CARGA: 24-5-93

EXTENSÓMETROS INFERIORES [mm/m]					
IF1	IF2	IF3	ID1	ID2	ID3
0.9374	0.5668	0.4578	0.8284	0.5668	0.5777
0.9701	0.5886	0.4578	0.8720	0.5777	0.5777
0.9919	0.5886	0.4687	0.9047	0.5995	0.5777
1.0028	0.5995	0.4578	0.9047	0.5886	0.5886
1.0246	0.6213	0.4687	0.9483	0.6213	0.5995
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1.0464	0.6213	0.4469	0.9592	0.6213	0.6104
1.0573	0.6322	0.4469	0.9810	0.6322	0.6104
1.1227	0.6540	0.4251	1.0137	0.6540	0.6104
1.1554	0.6649	0.4251	1.0682	0.6758	0.6213
1.1554	0.6758	0.4251	1.0900	0.6867	0.6213
1.1772	0.6758	0.4033	1.0682	0.6867	0.6322
1.1990	0.6867	0.3706	1.0900	0.6976	0.6322
1.1990	0.6649	0.3706	1.1009	0.6976	0.6322
1.2099	0.6867	0.3815	1.1118	0.6976	0.6431
1.2099	0.6867	0.3706	1.1227	0.6976	0.6540
1.2535	0.6976	0.3488	1.1445	0.7194	0.6540
1.2426	0.6976	0.3270	1.1554	0.7303	0.6540
1.2535	0.7085	0.3270	1.1554	0.7303	0.6649
1.2426	0.6976	0.3161	1.1445	0.7085	0.6540
1.2099	0.6867	0.3161	1.0900	0.6867	0.6431
1.1772	0.6540	0.2834	1.0900	0.6867	0.6213
1.1663	0.6213	0.2289	1.0900	0.6431	0.5995
1.1663	0.6104	0.2180	1.0791	0.6213	0.5668
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1.1445	0.5995	0.1962	1.0791	0.5995	0.5559