ANEXO 2

CIV 5007879 (PG1)

- PG1, K0+000

K 0+00							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	12961,07	11231,83	13560,07	15127,95	18096,59	18547,18
Ep (psi)	N/A	96651,60	74251,13	89029,95	107093,96	145344,92	132448,42
SN (in)	N/A	4,47	4,10	4,35	4,63	5,12	4,97
Mr (PSI)	N/A	4277,15	3706,50	4474,82	4992,22	5971,88	6120,57
Ae	N/A	42,71	41,07	40,97	41,99	43,76	42,11
0,7ae	N/A	29,90	28,75	28,68	29,40	30,64	29,48

Fuente: Autor

$$r \geq 0.7ae \implies r \geq 0.7(42.10\ in) \implies r \geq 29.47$$

$$SE\ TOMAN\ VALORES\ DESDE\ D35$$

- K0+020

K0+020							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	14118,23	13327,43	17389,91	18906,18	20114,56	18906,36
Ep (psi)	N/A	95166,09	95166,09	109370,35	135932,35	135932,35	135927,95
SN (in)	N/A	4,45	4,45	4,66	5,01	5,01	5,01
Mr (PSI)	N/A	4659,02	4398,05	5738,67	6239,04	6637,80	6239,10
Ae	N/A	41,33	42,11	40,40	42,21	41,36	42,21
0,7ae	N/A	28,93	29,48	28,28	29,55	28,95	29,55

Fuente: Autor

PROMEDIO ae	42
PROMEDIO 0.7 ae	29

$$r \geq 0.7ae \implies r \geq 0.7(42\ in) \implies r \geq 29$$

$$SE\ TOMAN\ VALORES\ DESDE\ D35$$

- K0+040

K0+040							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	12631,13	12341,13	15966,08	16915,12	17433,24	17527,98
Ep (psi)	N/A	79473,00	78680,82	104900,58	104900,58	68004,46	66707,60
SN (in)	N/A	4,19	4,18	4,60	4,60	3,98	3,95
Mr (PSI)	N/A	4168,27	4072,57	5268,81	5581,99	5752,97	5784,23
Ae	N/A	40,41	40,58	40,98	40,22	34,59	34,32
0,7ae	N/A	28,29	28,41	28,69	28,15	24,22	24,02

Fuente: Autor

PROMEDIO ae	39
PROMEDIO 0.7 ae	27

$$r \geq 0.7ae \implies r \geq 0.7(39\ in) \implies r \geq 27$$

SE TOMAN VALORES DESDE D35

- K0+061

K0+061							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	11817,57	12661,33	15718,09	16061,04	16503,71	15795,06
Ep (psi)	N/A	96886,09	96886,09	55825,48	52078,84	48267,23	54910,09
SN (in)	N/A	4,48	4,48	3,72	3,64	3,55	3,70
Mr (PSI)	N/A	3899,80	4178,24	5186,97	5300,14	5446,22	5212,37
ae	N/A	44,06	43,08	33,56	32,59	31,52	33,33
0,7ae	N/A	30,84	30,15	23,49	22,81	22,07	23,33

Fuente: Autor

PROMEDIO ae	36
PROMEDIO 0.7 ae	25

$$r \geq 0.7ae \implies r \geq 0.7(36\ in) \implies r \geq 25$$

SE TOMAN VALORES DESDE D35

- K0+080

K0+080							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	12939,38	13132,25	16913,78	17183,68	19003,13	18355,30
Ep (psi)	N/A	80021,80	81962,89	107996,88	107996,88	65625,83	91852,04
SN (in)	N/A	4,20	4,23	4,64	4,64	3,93	4,40
Mr(PSI)	N/A	4270,00	4333,64	5581,55	5670,62	6271,03	6057,25
ae	N/A	40,18	40,30	40,60	40,39	33,26	37,51
0,7ae	N/A	28,13	28,21	28,42	28,28	23,28	26,25

Fuente: Autor

PROMEDIO ae	39
PROMEDIO 0.7 ae	27

$$r \geq 0.7ae \implies r \geq 0.7(39\ in) \implies r \geq 27$$

SE TOMAN VALORES DESDE D35

- K0+091.

K0+091							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	11137,63	12643,13	16056,72	22301,00	22147,51	25897,94
Ep (psi)	N/A	79362,18	103852,04	56410,17	31407,31	31580,47	28424,38
SN (in)	N/A	4,19	4,58	3,74	3,07	3,08	2,97
Mr (PSI)	N/A	3675,42	4172,23	5298,72	7359,33	7308,68	8546,32
ae	N/A	42,08	44,09	33,44	24,98	25,08	23,10
0,7ae	N/A	29,46	30,86	23,41	17,49	17,55	16,17

Fuente: Autor

PROMEDIO ae	32
PROMEDIO 0.7 ae	22

$$r \geq 0.7ae \implies r \geq 0.7(32\ in) \implies r \geq 22$$

SE TOMAN VALORES DESDE D24

CIV 5004239 (PG2)

- K0+000

K0+00							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	15100,98	11614,73	31048,34	35635,88	38397,57	50583,92
Ep (psi)	N/A	93873,10	79390,20	54810,41	44910,99	43114,41	38624,96
SN (in)	N/A	4,43	4,19	3,70	3,46	3,42	3,29
Mr (PSI)	N/A	4983,32	3832,86	10245,95	11759,84	12671,20	16692,69
ae	N/A	40,25	41,52	26,83	24,12	23,27	20,65
0,7ae	N/A	28,18	29,06	18,78	16,89	16,29	14,46

Fuente: Autor

PROMEDIO ae	29
PROMEDIO 0.7 ae	21

$$r \geq 0.7ae \implies r \geq 0.7(29\ in) \implies r \geq 21$$

$$SE\ TOMAN\ VALORES\ DESDE\ D24$$

- K0+020

K0+020							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	16570,01	17757,97	23588,17	23529,41	26143,79	26587,46
Ep (psi)	N/A	134986,11	114711,64	94711,68	95719,81	63591,07	61874,31
SN (in)	N/A	5,00	4,73	4,44	4,46	3,89	3,85
Mr (PSI)	N/A	5468,10	5860,13	7784,10	7764,71	8627,45	8773,86
ae	N/A	43,97	40,76	34,92	35,07	29,71	29,30
0,7ae	N/A	30,78	28,53	24,44	24,55	20,80	20,51

Fuente: Autor

PROMEDIO ae	36
PROMEDIO 0.7 ae	25

$$r \geq 0.7ae \implies r \geq 0.7(36\ in) \implies r \geq 25$$

$$SE\ TOMAN\ VALORES\ DESDE\ D35$$

- K0+040

K0+040							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	20300,04	27868,11	56066,79	117740,25	134560,29	130822,50
Ep (psi)	N/A	105199,43	105199,43	43298,82	37952,69	37509,34	37595,55
SN (in)	N/A	4,60	4,60	3,42	3,27	3,26	3,26
Mr (PSI)	N/A	6699,01	9196,48	18502,04	38854,28	44404,89	43171,43
ae	N/A	37,93	34,23	20,73	15,98	15,33	15,46
0,7ae	N/A	26,55	23,96	14,51	11,18	10,73	10,82

Fuente: Autor

PROMEDIO ae	23
PROMEDIO 0.7 ae	16

$$r \geq 0.7ae \implies r \geq 0.7(23\ in) \implies r \geq 16$$

SE TOMAN VALORES DESDE D24

- K0+063

K0+063							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	11462,87	13772,53	19920,98	23994,95	26032,09	33703,97
Ep (psi)	N/A	93041,86	54675,53	27206,25	23255,42	22500,72	20808,95
SN (in)	N/A	4,42	3,70	2,93	2,78	2,75	2,68
Mr (PSI)	N/A	3782,75	4544,93	6573,92	7918,33	8590,59	11122,31
ae	N/A	43,92	34,79	24,74	22,23	21,46	19,36
0,7ae	N/A	30,74	24,35	17,32	15,56	15,02	13,55

Fuente: Autor

PROMEDIO ae	28
PROMEDIO 0.7 ae	19

$$r \geq 0.7ae \implies r \geq 0.7(28\ in) \implies r \geq 19$$

SE TOMAN VALORES DESDE D24

- K0+079

K0+079							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	12610,79	14791,19	24162,40	32080,78	35170,04	40582,08
Ep (psi)	N/A	82402,68	104024,72	39106,44	32413,23	31118,84	29569,57
SN (in)	N/A	4,24	4,58	3,31	3,11	3,06	3,01
Mr (PSI)	N/A	4161,56	4881,09	7973,59	10586,66	11606,11	13392,09
ae	N/A	40,91	41,90	26,10	22,52	21,61	20,36
0,7ae	N/A	28,64	29,33	18,27	15,76	15,13	14,25

Fuente: Autor

PROMEDIO ae	29
PROMEDIO 0.7 ae	20

$$r \geq 0.7ae \implies r \geq 0.7(29\ in) \implies r \geq 20$$

SE TOMAN VALORES DESDE D24

CIV 5007251 (PR1)

- K0+000

K0+00							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	12491,53	9985,18	11705,90	11404,65	13487,23	14361,41
Ep (psi)	N/A	47811,13	47811,13	47811,13	47811,13	53819,57	53819,57
SN (in)	N/A	1,29	1,29	1,29	1,29	1,34	1,34
Mr (PSI)	N/A	4122,21	3295,11	3862,95	3763,53	4450,79	4739,26
ae	N/A	13,66	14,53	13,90	14,00	13,82	13,58
0,7ae	N/A	9,56	10,17	9,73	9,80	9,67	9,51

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

SE TOMAN VALORES DESDE D12

- K0+020

K0+020							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	11802,75	11212,61	16566,38	22535,14	27445,79	26420,51
Ep (psi)	N/A	74949,01	45534,99	74949,01	74255,72	45534,99	74255,72
SN (in)	N/A	1,49	1,27	1,49	1,49	1,27	1,49
Mr (PSI)	N/A	3894,91	3700,16	5466,90	7436,60	9057,11	8718,77
ae	N/A	15,73	13,88	14,30	13,12	11,03	12,58
0,7ae	N/A	11,01	9,72	10,01	9,18	7,72	8,81

Fuente: Autor

PROMEDIO ae	13
PROMEDIO 0.7 ae	9

$$r \geq 0.7ae \implies r \geq 0.7(13\ in) \implies r \geq 9$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+040

K0+040							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	13550,40	11891,46	17183,58	24030,66	29292,83	32720,07
Ep (psi)	N/A	88911,02	107761,80	88911,02	107761,80	120194,92	120194,92
SN (in)	N/A	1,58	1,69	1,58	1,69	1,75	1,75
Mr (PSI)	N/A	4471,63	3924,18	5670,58	7930,12	9666,63	10797,62
ae	N/A	15,88	17,45	14,84	14,26	13,92	13,51
0,7ae	N/A	11,12	12,21	10,39	9,99	9,74	9,46

Fuente: Autor

PROMEDIO ae	15
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(15\ in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+060

K0+060							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	10224,21	8155,86	10292,65	11150,15	13577,11	19477,11
Ep (psi)	N/A	39977,16	39720,11	39720,11	50962,98	50962,98	100839,56
SN (in)	N/A	1,21	1,21	1,21	1,31	1,31	1,65
Mr (PSI)	N/A	3373,99	2691,43	3396,58	3679,55	4480,45	6427,45
ae	N/A	13,74	14,59	13,69	14,34	13,59	14,85
0,7ae	N/A	9,62	10,22	9,58	10,04	9,51	10,39

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+080

K0+080							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	12430,16	8555,97	11429,46	9504,72	9564,70	11739,50
Ep (psi)	N/A	49527,85	49527,85	49527,85	48422,88	48422,88	48422,88
SN (in)	N/A	1,30	1,30	1,30	1,29	1,29	1,29
Mr (PSI)	N/A	4101,95	2823,47	3771,72	3136,56	3156,35	3874,04
ae	N/A	13,81	15,32	14,13	14,78	14,75	13,94
0,7ae	N/A	9,67	10,73	9,89	10,35	10,33	9,76

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+100

K0+100							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	11300,44	9246,79	15427,19	14573,38	18606,59	22247,48
Ep (psi)	N/A	63815,40	63815,40	63815,40	56946,48	56946,48	56946,48
SN (in)	N/A	1,42	1,42	1,42	1,36	1,36	1,36
Mr (PSI)	N/A	3729,15	3051,44	5090,97	4809,21	6140,17	7341,67
ae	N/A	15,21	16,11	13,95	13,74	12,87	12,28
0,7ae	N/A	10,65	11,28	9,77	9,62	9,01	8,60

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+109

K0+109							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	12822,65	12265,96	19181,33	21186,65	24860,60	27096,07
Ep (psi)	N/A	74398,09	91434,02	74398,09	91434,02	92965,80	69374,41
SN (in)	N/A	1,49	1,60	1,49	1,60	1,61	1,46
Mr (PSI)	N/A	4231,47	4047,77	6329,84	6991,60	8204,00	8941,70
Ae	N/A	15,33	16,48	13,71	14,11	13,57	12,28
0,7ae	N/A	10,73	11,53	9,60	9,88	9,50	8,60

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

CIV 5007295 (PR2)

- K0+000

K0+00							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	8301,72	7285,45	9576,91	10859,12	13782,10	15747,59
Ep (psi)	N/A	42568,72	42568,72	42568,72	62523,85	62523,85	81081,10
SN (in)	N/A	1,24	1,24	1,24	1,41	1,41	1,53
Mr (PSI)	N/A	2739,57	2404,20	3160,38	3583,51	4548,09	5196,71
ae	N/A	14,81	15,36	14,23	15,30	14,31	14,82
0,7ae	N/A	10,36	10,75	9,96	10,71	10,02	10,38

Fuente: Autor

PROMEDIO ae	15
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(15\ in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+030

K0+030							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	12329,15	15483,87	29395,43	34551,28	38580,16	41712,40
Ep (psi)	N/A	70528,42	70528,42	22203,03	18356,54	16743,61	15170,46
SN (in)	N/A	1,46	1,46	1,00	0,93	0,91	0,88
Mr (PSI)	N/A	4068,62	5109,68	9700,49	11401,92	12731,45	13765,09
ae	N/A	15,27	14,33	9,29	8,69	8,39	8,15
0,7ae	N/A	10,69	10,03	6,50	6,08	5,87	5,71

Fuente: Autor

PROMEDIO ae	11
PROMEDIO 0.7 ae	7

$$r \geq 0.7ae \implies r \geq 0.7(11\ in) \implies r \geq 7$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+050

K0+050							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	8889,07	8221,96	12076,60	16839,44	21911,19	22619,52
Ep (psi)	N/A	45062,19	64144,49	45062,19	64144,49	22275,92	20832,67
SN (in)	N/A	1,26	1,42	1,26	1,42	1,00	0,97
Mr (PSI)	N/A	2933,39	2713,25	3985,28	5557,02	7230,69	7464,44
ae	N/A	14,76	16,70	13,57	13,64	9,88	9,67
0,7ae	N/A	10,33	11,69	9,50	9,55	6,91	6,77

Fuente: Autor

PROMEDIO ae	13
PROMEDIO 0.7 ae	9

$$r \geq 0.7ae \implies r \geq 0.7(13\,in) \implies r \geq 9$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+074

K0+074							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	9653,98	9417,07	17542,98	18273,43	23024,52	24757,54
Ep (psi)	N/A	37923,04	38932,10	79925,64	68122,85	29620,95	22676,19
SN (in)	N/A	1,19	1,20	1,53	1,45	1,10	1,00
Mr (PSI)	N/A	3185,81	3107,63	5789,18	6030,23	7598,09	8169,99
ae	N/A	13,76	13,95	14,33	13,56	10,40	9,66
0,7ae	N/A	9,63	9,76	10,03	9,49	7,28	6,76

Fuente: Autor

PROMEDIO ae	13
PROMEDIO 0.7 ae	9

$$r \geq 0.7ae \implies r \geq 0.7(13\,in) \implies r \geq 9$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+090

K0+090							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	8707,48	9356,13	16085,99	20466,54	24128,98	26811,71
Ep (psi)	N/A	33839,79	41232,14	65984,50	19072,34	14071,42	12802,46
SN (in)	N/A	1,15	1,22	1,43	0,95	0,86	0,83
Mr (PSI)	N/A	2873,47	3087,52	5308,38	6753,96	7962,56	8847,86
ae	N/A	13,72	14,20	13,92	9,70	8,84	8,53
0,7ae	N/A	9,60	9,94	9,74	6,79	6,19	5,97

Fuente: Autor

PROMEDIO ae	11
PROMEDIO 0.7 ae	8

$$r \geq 0.7ae \implies r \geq 0.7(11\,in) \implies r \geq 8$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+0110

K0+110							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	17189,79	15034,33	18063,85	17503,48	20193,48	22837,87
Ep (psi)	N/A	89025,79	58251,19	85079,68	87534,27	75659,73	120133,01
SN (in)	N/A	1,58	1,37	1,56	1,57	1,50	1,75
Mr (PSI)	N/A	5672,63	4961,33	5961,07	5776,15	6663,85	7536,50
ae	N/A	14,85	13,70	14,46	14,70	13,58	14,91
0,7ae	N/A	10,39	9,59	10,12	10,29	9,51	10,44

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\,in) \implies r \geq 10$$

$$SE\ TOMAN\ VALORES\ DESDE\ D12$$

- K0+130

K0+130							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	10709,61	11435,66	20579,42	22926,63	24534,37	26423,98
Ep (psi)	N/A	42914,83	48612,96	48612,96	119143,38	103987,87	103987,87
SN (in)	N/A	1,24	1,29	1,29	1,74	1,67	1,67
Mr (PSI)	N/A	3534,17	3773,77	6791,21	7565,79	8096,34	8719,91
ae	N/A	13,83	14,06	12,04	14,86	14,04	13,76
0,7ae	N/A	9,68	9,84	8,42	10,40	9,83	9,63

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

SE TOMAN VALORES DESDE D12

CIV 5007321 (PR3)

- K0+000

K0+00							
P(lb)	**D (in)0**	**D (in)12**	**D (in)24**	**D (in)35**	**D (in)47**	**D (in)59**	**D (in)71**
Mrr (Psi)	N/A	13535.84	11106.12	16086.80	13966.21	16609.69	18289.63
Ep (psi)	100	50196.19	50196.19	72542.19	70263.95	70263.95	85072.14
SN (in)	0.16	1.31	1.31	1.48	1.46	1.46	1.56
Mr (PSI)	N/A	4466.83	3665.02	5308.64	4608.85	5481.20	6035.58
ae	N/A	13.54	14.30	14.29	14.73	14.04	14.41
0,7ae	N/A	9.48	10.01	10.00	10.31	9.83	10.09

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

SE TOMAN VALORES DESDE D12

- K0+020

K0+020							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	17568,11	15835,20	24059,46	24247,65	25165,13	26302,00
Ep (psi)	N/A	79938,47	59323,76	99648,02	99648,02	114291,76	109203,43
SN (in)	N/A	1,53	1,38	1,64	1,64	1,72	1,69
Mr (PSI)	N/A	5797,48	5225,62	7939,62	8001,72	8304,49	8679,66
ae	N/A	14,32	13,58	13,96	13,93	14,31	13,97
0,7ae	N/A	10,03	9,51	9,77	9,75	10,02	9,78

Fuente: Autor

PROMEDIO ae	14
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(14\ in) \implies r \geq 10$$

SE TOMAN VALORES DESDE D12

- K0+040

K0+040							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	15279,44	14922,60	25146,02	26321,00	33618,56	35487,44
Ep (psi)	N/A	60979,63	56482,65	110169,57	110169,57	49358,79	42162,26
SN (in)	N/A	1,39	1,36	1,70	1,70	1,30	1,23
Mr (PSI)	N/A	5042,21	4924,46	8298,19	8685,93	11094,13	11710,85
ae	N/A	13,82	13,62	14,17	14,00	10,72	10,22
0,7ae	N/A	9,67	9,53	9,92	9,80	7,51	7,15

Fuente: Autor

PROMEDIO ae	13
PROMEDIO 0.7 ae	9

$$r \geq 0.7ae \implies r \geq 0.7(13\ in) \implies r \geq 9$$

SE TOMAN VALORES DESDE D12

- K0+051

K0+051							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	15899,77	14430,22	27367,66	32175,49	34014,09	35274,80
Ep (psi)	N/A	62479,38	124920,16	124920,16	140846,34	162233,32	149628,82
SN (in)	N/A	1,41	1,77	1,77	1,84	1,93	1,88
Mr (PSI)	N/A	5246,92	4761,97	9031,33	10617,91	11224,65	11640,68
ae	N/A	13,76	17,21	14,33	14,17	14,51	14,05
0,7ae	N/A	9,63	12,05	10,03	9,92	10,16	9,83

Fuente: Autor

PROMEDIO ae	15
PROMEDIO 0.7 ae	10

$$r \geq 0.7ae \implies r \geq 0.7(15\ in) \implies r \geq 10$$

SE TOMAN VALORES DESDE D12

CIV 5003992 (PGr1)

- K0+000

K0+00							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	15010,54	25887,63	46103,47	93093,55	107574,77	100851,34
Ep (psi)	N/A	29574,11	29574,11	23297,53	21559,95	21380,94	21456,22
SN (in)	N/A	3,01	3,01	2,78	2,71	2,70	2,71
Mr (PSI)	N/A	4953,48	8542,92	15214,15	30720,87	35499,67	33280,94
ae	N/A	27,78	23,39	18,23	14,55	13,95	14,21
0,7ae	N/A	19,45	16,38	12,76	10,18	9,76	9,95

Fuente: Autor

PROMEDIO ae	19
PROMEDIO 0.7 ae	13

$$r \geq 0.7ae \implies r \geq 0.7(19\ in) \implies r \geq 13$$

SE TOMAN VALORES DESDE D24

- K0+020

K0+020							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	14047,14	19637,91	36775,11	53363,88	61368,46	68187,17
Ep (psi)	N/A	98333,62	46682,42	27756,69	24371,25	23906,16	23618,35
SN (in)	N/A	4,50	3,51	2,95	2,83	2,81	2,80
Mr (PSI)	N/A	4635,56	6480,51	12135,78	17610,08	20251,59	22501,77
ae	N/A	41,84	29,50	20,58	17,69	16,88	16,31
0,7ae	N/A	29,29	20,65	14,41	12,38	11,82	11,42

Fuente: Autor

PROMEDIO ae	24
PROMEDIO 0.7 ae	17

$$r \geq 0.7ae \implies r \geq 0.7(24\ in) \implies r \geq 17$$

SE TOMAN VALORES DESDE D24

CIV 5004075 (PGr2)

- K0+000

K0+005							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	14215,66	20397,43	27899,93	44139,25	64727,83	77087,28
Ep (psi)	N/A	95650,42	32965,38	26705,79	22443,40	21291,14	20957,44
SN (in)	N/A	4,46	3,12	2,91	2,75	2,70	2,69
Mr (PSI)	N/A	4691,17	6731,15	9206,98	14565,95	21360,19	25438,80
ae	N/A	41,30	26,09	22,14	18,26	16,07	15,22
0,7ae	N/A	28,91	18,26	15,50	12,78	11,25	10,65

Fuente: Autor

PROMEDIO ae	23
PROMEDIO 0.7 ae	16

$$r \geq 0.7ae \implies r \geq 0.7(23\ in) \implies r \geq 16$$

SE TOMAN VALORES DESDE D24

- K0+025

K0+025							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	12407,53	18418,87	26952,78	47706,43	57811,18	69165,14
Ep (psi)	N/A	29696,43	29696,43	22505,22	19727,93	19265,84	18944,21
SN (in)	N/A	3,02	3,02	2,75	2,63	2,61	2,60
Mr (PSI)	N/A	4094,48	6078,23	8894,42	15743,12	19077,69	22824,50
ae	N/A	29,56	26,07	21,23	17,18	16,13	15,25
0,7ae	N/A	20,69	18,25	14,86	12,03	11,29	10,68

Fuente: Autor

PROMEDIO ae	21
PROMEDIO 0.7 ae	15

$$r \geq 0.7ae \implies r \geq 0.7(21\ in) \implies r \geq 15$$

SE TOMAN VALORES DESDE D24

CIV 5003929 (PGr3)

- K0+000

K0+00							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	15080,95	17603,75	32572,93	70415,01	95764,41	114005,25
Ep (psi)	N/A	105389,04	38645,99	38645,99	30471,30	29348,94	28916,03
SN (in)	N/A	4,60	3,29	3,29	3,04	3,01	2,99
Mr (PSI)	N/A	4976,71	5809,24	10749,07	23236,95	31602,25	37621,73
ae	N/A	41,82	28,76	23,67	17,41	15,75	14,92
0,7ae	N/A	29,27	20,13	16,57	12,19	11,02	10,45

Fuente: Autor

PROMEDIO ae	24
PROMEDIO 0.7 ae	17

$$r \geq 0.7ae \implies r \geq 0.7(24\ in) \implies r \geq 17$$

SE TOMAN VALORES DESDE D24

- K0+020

K0+020							
P(lb)	D (in)0	D (in)12	D (in)24	D (in)35	D (in)47	D (in)59	D (in)71
Mrr (Psi)	N/A	11065,93	16598,94	28158,80	27188,19	35042,06	39422,32
Ep (psi)	N/A	68510,67	25996,16	19093,85	19288,66	18135,73	17757,58
SN (in)	N/A	3,99	2,89	2,60	2,61	2,56	2,54
Mr (PSI)	N/A	3651,76	5477,65	9292,40	8972,10	11563,88	13009,37
ae	N/A	40,20	25,83	19,92	20,20	18,36	17,62
0,7ae	N/A	28,14	18,08	13,94	14,14	12,85	12,33

Fuente: Autor

PROMEDIO ae	24
PROMEDIO 0.7 ae	17

$$r \geq 0.7ae \implies r \geq 0.7(24\ in) \implies r \geq 17$$

SE TOMAN VALORES DESDE D24