

KAL	IK	QM	ICF	QT	HN	PI	EP	ES	FP	FEC	PG	INVERSION	FECI	CESP	KESP	DUR
(-)	(-)	(M/S)	(-)	(M/S)	(M)	(MW)	(GWH)	(GWH)	(-)	(\$/MWH)	(MW)	(10 \$)	(-)	(\$/MWH)	(\$/KW)	(AÑOS)
PROYECTO MARA140																
1	1	102.6	1.00	102.6	164.6	140.9	349.8	414.9	0.620	63.188	34.8	300.2	1.013	46.05	2131.	7
2	1	102.6	1.00	102.6	213.7	182.9	454.1	538.6	0.620	63.466	51.6	391.4	1.017	46.25	2140.	7
3	1	102.6	1.00	102.6	143.0	122.4	141.8	512.0	0.610	76.538	22.9	259.6	1.019	46.57	2121.	7
4	1	102.6	1.00	102.6	282.1	241.4	599.3	710.8	0.620	60.372	75.0	491.4	0.968	43.99	2036.	7
PROYECTO MARA150																
1	1	104.0	1.00	104.0	61.8	53.6	89.3	197.1	0.610	30.872	8.8	49.4	0.443	20.25	923.	3
2	1	104.0	1.00	104.0	126.0	109.3	182.1	401.8	0.610	37.156	23.8	121.3	0.533	24.37	1110.	4
3	1	104.0	1.00	104.0	122.3	106.1	132.0	434.8	0.610	30.061	21.3	89.6	0.405	18.53	844.	4
4	1	104.0	1.00	104.0	169.2	146.7	244.5	539.5	0.610	61.321	33.8	268.9	0.880	40.22	1832.	7
5	1	104.0	1.00	104.0	166.4	144.3	179.6	591.5	0.610	94.219	28.9	381.8	1.270	58.08	2646.	7
6	1	104.0	1.00	104.0	213.2	184.9	308.2	680.0	0.610	70.286	44.1	388.4	1.008	46.10	2100.	7
PROYECTO MARA160																
1	1	107.3	1.00	107.3	68.3	61.1	125.8	272.8	0.745	31.569	12.6	70.6	0.485	20.77	1155.	3
2	1	107.3	1.00	107.3	130.4	116.7	347.9	429.9	0.761	46.051	34.6	221.0	0.784	33.33	1893.	6
3	1	107.3	1.00	107.3	148.7	133.1	273.9	593.9	0.745	60.015	36.4	292.1	0.922	39.48	2195.	7
4	1	107.3	1.00	107.3	204.6	183.1	545.7	674.2	0.761	56.316	66.4	423.8	0.959	40.75	2315.	7
5	1	107.3	1.00	107.3	239.5	214.4	441.2	956.7	0.745	44.522	63.4	349.0	0.684	29.29	1626.	7
6	1	107.3	1.00	107.3	295.4	264.3	788.0	973.6	0.761	43.906	105.5	477.2	0.747	31.77	1805.	7
PROYECTO MARA180																
1	1	109.4	1.00	109.4	42.5	38.8	71.6	181.2	0.745	32.154	7.2	44.5	0.482	20.63	1147.	3
2	1	109.4	1.00	109.4	84.8	77.3	168.0	336.5	0.745	32.652	16.9	93.6	0.508	21.76	1210.	4
3	1	109.4	1.00	109.4	153.7	140.2	465.3	485.5	0.774	43.562	46.7	262.9	0.767	32.44	1875.	7
4	1	109.4	1.00	109.4	133.7	122.0	225.2	570.2	0.745	16.909	31.9	73.6	0.253	10.85	603.	3
5	1	109.4	1.00	109.4	176.3	160.9	349.4	699.8	0.745	20.270	46.1	120.8	0.316	13.51	751.	4
6	1	109.4	1.00	109.4	248.7	226.9	753.1	785.8	0.774	30.551	93.1	298.5	0.538	22.75	1315.	7
PROYECTO MARA190																
1	1	156.4	1.00	156.4	88.2	115.0	272.7	478.6	0.746	26.994	27.0	117.8	0.430	18.40	1024.	4
2	1	156.4	1.00	156.4	131.2	171.1	540.5	610.1	0.768	30.168	53.9	217.5	0.523	22.17	1271.	6
3	1	156.4	1.00	156.4	156.8	204.6	485.0	851.2	0.746	56.353	61.2	437.5	0.898	38.40	2139.	7
4	1	156.4	1.00	156.4	196.5	256.3	809.6	913.9	0.768	47.272	97.3	510.4	0.819	34.74	1992.	7
5	1	156.4	1.00	156.4	173.2	225.9	963.5	659.5	0.820	30.303	96.1	334.1	0.581	24.15	1479.	7
6	1	156.4	1.00	156.4	233.4	304.4	1298.6	888.9	0.820	40.624	150.1	603.7	0.779	32.37	1983.	7
PROYECTO MARA200																
1	1	162.0	1.00	162.0	75.1	101.4	265.4	398.5	0.747	18.952	26.2	75.1	0.310	13.26	740.	3
2	1	162.0	1.00	162.0	108.8	147.0	259.8	698.9	0.745	91.445	41.9	475.0	1.358	58.11	3231.	7
3	1	162.0	1.00	162.0	167.5	226.3	592.1	889.1	0.747	54.079	78.9	477.9	0.885	37.85	2112.	7
PROYECTO MARA210																
1	1	211.0	1.00	211.0	97.2	171.0	645.1	541.2	0.792	20.018	64.4	156.3	0.368	15.45	914.	5
2	1	211.0	1.00	211.0	117.2	206.2	777.7	652.4	0.792	34.252	85.8	322.3	0.629	26.44	1563.	6
3	1	211.0	1.00	211.0	196.3	345.4	1302.9	1093.1	0.792	47.144	170.4	743.3	0.866	36.39	2152.	7
PROYECTO MARA230																
1	1	222.6	1.00	222.6	77.2	143.3	341.5	594.5	0.746	19.582	34.4	106.6	0.312	13.36	744.	4
2	1	222.6	1.00	222.6	106.1	196.9	581.0	729.4	0.760	20.168	58.3	162.6	0.342	14.55	826.	5
3	1	222.6	1.00	222.6	110.3	204.7	487.9	849.4	0.746	33.640	58.7	261.7	0.537	22.96	1278.	6
4	1	222.6	1.00	222.6	136.0	252.4	744.6	934.8	0.760	29.585	84.7	305.7	0.502	21.35	1211.	6
5	1	222.6	1.00	222.6	133.3	247.5	589.9	1026.9	0.746	40.998	74.4	385.7	0.654	27.98	1558.	7
6	1	222.6	1.00	222.6	159.3	295.8	872.7	1095.5	0.760	35.226	105.3	426.6	0.598	25.42	1442.	7

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KAL IK  QM  ICF  QT  HN  PI  EP  ES  FP  FEC  PG  INVERSION  FEC1  CESP  KESP  DUR
3      3      3      3      3      3      3      3      3      3      3      3      3      3      3      3
(-) (-) (M /S) (-) (M /S) (M) (MW) (GWH) (GWH) (-) ($/MWH) (MW) (10 $) (-) ($/MWH) ($/KW) (ANUS)
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PROYECTO MARA240

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=====
1 1 227.4 1.00 227.4 39.4 74.7 47.6 415.3 0.708 26.343 4.7 57.3 0.334 14.53 767. 5
=====
2 1 227.4 1.00 227.4 116.6 221.2 604.6 784.6 0.717 22.893 60.7 194.6 0.379 16.43 880. 5
=====
3 1 227.4 1.00 227.4 146.0 276.9 1041.2 786.0 0.753 22.555 104.6 275.8 0.415 17.70 996. 6
=====
4 1 227.4 1.00 227.4 58.9 111.6 71.1 620.6 0.708 40.849 8.5 132.8 0.518 22.52 1190. 4
=====
5 1 227.4 1.00 227.4 133.2 252.7 690.8 896.3 0.717 26.062 74.6 253.1 0.432 18.70 1001. 5
=====
6 1 227.4 1.00 227.4 162.6 308.3 1159.4 875.3 0.753 24.709 123.6 336.4 0.455 19.39 1091. 6
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PROYECTO MARA250

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=====
1 1 244.7 1.00 244.7 22.5 46.0 20.9 263.9 0.708 33.823 2.0 44.1 0.417 18.15 959. 5
=====
2 1 244.7 1.00 244.7 61.6 125.6 126.2 652.3 0.708 25.241 12.4 97.3 0.337 14.67 775. 4
=====
3 1 244.7 1.00 244.7 138.7 283.0 914.3 903.5 0.733 22.958 91.0 267.4 0.401 17.25 945. 6
=====
4 1 244.7 1.00 244.7 64.4 131.5 59.8 755.3 0.708 104.046 8.3 388.0 1.284 55.84 2950. 7
=====
5 1 244.7 1.00 244.7 105.3 214.9 215.9 1116.1 0.708 60.613 26.9 399.9 0.810 35.22 1861. 7
=====
6 1 244.7 1.00 244.7 169.4 345.7 1116.8 1103.6 0.733 37.357 123.7 531.4 0.655 28.07 1537. 7
=====
7 1 244.7 1.00 244.7 87.8 179.2 81.5 1029.3 0.708 99.900 11.8 507.8 1.233 53.62 2835. 7
=====
8 1 244.7 1.00 244.7 123.3 251.6 252.7 1308.7 0.708 66.685 32.8 515.1 0.891 48.75 2047. 7
=====
9 1 244.7 1.00 244.7 192.8 393.4 1270.9 1255.9 0.733 39.618 148.5 641.4 0.692 29.77 1630. 7
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PROYECTO MARA260

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=====
1 1 249.0 1.00 249.0 43.0 89.4 64.5 489.3 0.708 25.084 6.5 66.1 0.322 14.00 740. 4
=====
2 1 249.0 1.00 249.0 65.7 136.4 180.4 665.2 0.708 19.782 18.0 86.5 0.276 12.00 634. 4
=====
3 1 249.0 1.00 249.0 104.4 216.8 351.8 992.2 0.708 18.493 35.0 133.7 0.288 11.67 616. 4
=====
4 1 249.0 1.00 249.0 127.8 265.3 191.6 1452.7 0.708 72.847 27.0 570.1 0.935 40.67 2149. 7
=====
5 1 249.0 1.00 249.0 148.1 307.6 406.7 1499.9 0.708 58.241 54.5 574.3 0.812 35.33 1867. 7
=====
6 1 249.0 1.00 249.0 183.6 381.3 618.6 1744.7 0.708 47.192 78.0 599.9 0.685 29.77 1573. 7
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PROYECTO MARA290

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=====
1 1 262.0 1.00 262.0 64.3 140.4 255.5 615.3 0.708 19.977 25.8 95.9 0.297 12.92 683. 4
=====
2 1 262.0 1.00 262.0 87.0 190.1 489.6 698.3 0.713 17.765 49.0 127.0 0.289 12.54 668. 4
=====
3 1 262.0 1.00 262.0 130.2 284.6 1168.1 746.6 0.768 16.092 117.4 211.5 0.306 12.95 743. 5
=====
4 1 262.0 1.00 262.0 105.3 230.1 418.6 1008.2 0.708 39.586 52.1 311.4 0.589 25.60 1353. 7
=====
5 1 262.0 1.00 262.0 125.7 274.7 707.2 1008.8 0.713 32.493 84.0 335.6 0.529 22.94 1222. 7
=====
6 1 262.0 1.00 262.0 164.4 359.3 1474.8 942.6 0.768 24.851 166.9 412.3 0.472 20.01 1148. 7
=====
7 1 262.0 1.00 262.0 173.7 379.5 690.3 1662.4 0.708 48.077 95.9 623.6 0.715 31.09 1644. 7
=====
8 1 262.0 1.00 262.0 194.0 424.0 1091.7 1557.3 0.713 40.233 146.0 641.5 0.655 28.41 1513. 7
=====
9 1 262.0 1.00 262.0 232.8 508.6 2087.9 1334.5 0.768 29.718 265.6 698.0 0.564 23.92 1372. 7
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PROYECTO MARA300

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=====
1 1 269.0 1.00 269.0 66.7 149.7 153.1 774.5 0.708 20.653 15.4 95.2 0.277 12.03 636. 4
=====
2 1 269.0 1.00 269.0 113.1 253.7 515.1 1059.4 0.709 19.999 51.4 178.1 0.305 13.27 702. 5
=====
3 1 269.0 1.00 269.0 126.6 283.9 290.5 1469.2 0.708 31.623 37.6 276.4 0.424 18.42 973. 6
=====
4 1 269.0 1.00 269.0 168.2 377.4 766.3 1576.1 0.709 26.280 91.9 348.3 0.401 17.44 923. 6
=====
5 1 269.0 1.00 269.0 171.5 384.8 393.7 1991.2 0.708 45.661 54.2 540.8 0.612 26.60 1405. 7
=====
6 1 269.0 1.00 269.0 213.2 478.3 971.2 1997.4 0.709 35.894 124.9 602.8 0.548 23.82 1260. 7
=====
7 1 269.0 1.00 269.0 207.5 465.5 476.3 2408.7 0.708 55.011 67.5 788.2 0.737 32.05 1693. 7
=====
8 1 269.0 1.00 269.0 249.2 559.0 1135.0 2334.4 0.709 42.750 151.4 839.1 0.653 28.37 1501. 7
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KAL	IK	QM	ICF	QT	HN	PI	EP	ES	FP	FEC	PG	INVERSION	FECI	CESP	KESP	DUR
(=)	(-)	(M/S)	(-)	(M/S)	(M)	(MW)	(GWH)	(GWH)	(-)	(\$/MWH)	(MW)	(10 \$)	(-)	(\$/MWH)	(\$/KW)	(AÑOS)

PROYECTO MARA320

1	1	281.8	1.00	281.8	35.3	82.9	58.7	454.9	0.708	26.867	6.0	65.5	0.344	14.97	791.	4
2	1	281.8	1.00	281.8	79.1	185.9	297.0	855.5	0.708	18.986	29.7	117.3	0.275	11.94	631.	4
3	1	281.8	1.00	281.8	144.1	338.7	1026.6	1127.2	0.726	19.702	102.3	267.1	0.337	14.55	789.	6
4	1	281.8	1.00	281.8	81.1	190.6	135.0	1046.3	0.708	64.294	18.3	360.7	0.824	55.82	1893.	7
5	1	281.8	1.00	281.8	120.4	283.0	451.9	1501.9	0.708	41.163	54.7	387.0	0.595	25.88	1368.	7
6	1	281.8	1.00	281.8	178.6	419.8	1272.6	1597.3	0.726	30.237	141.9	508.1	0.518	22.32	1210.	7
7	1	281.8	1.00	281.8	117.1	275.1	194.8	1510.4	0.708	71.665	27.4	580.4	0.918	39.93	2110.	7
8	1	281.8	1.00	281.8	150.4	367.5	586.9	1690.9	0.708	49.517	76.4	604.7	0.716	31.14	1645.	7
9	1	281.8	1.00	281.8	214.6	504.3	1528.9	1678.7	0.726	35.046	183.2	707.6	0.600	25.88	1403.	7

PROYECTO MARA330

1	1	286.0	1.00	286.0	48.3	115.3	117.7	596.6	0.708	25.825	11.9	91.6	0.346	15.04	795.	4
2	1	286.0	1.00	286.0	83.2	198.3	391.8	850.9	0.708	21.309	38.8	147.4	0.323	14.05	743.	4
3	1	286.0	1.00	286.0	127.5	303.5	935.4	987.4	0.730	23.055	95.7	284.4	0.399	17.19	937.	6
4	1	286.0	1.00	286.0	79.4	189.5	193.5	980.7	0.708	57.330	24.1	334.3	0.788	33.39	1764.	7
5	1	286.0	1.00	286.0	110.7	264.1	521.6	1117.2	0.708	40.403	59.8	372.1	0.613	26.63	1409.	7
6	1	286.0	1.00	286.0	150.4	357.7	1176.6	1166.7	0.730	33.169	123.6	483.5	0.574	24.73	1340.	7
7	1	286.0	1.00	286.0	133.4	316.2	325.0	1646.5	0.708	86.007	45.3	842.9	1.153	50.14	2649.	7
8	1	286.0	1.00	286.0	164.7	392.9	776.1	1661.5	0.708	64.071	100.6	864.0	0.956	41.58	2199.	7
9	1	286.0	1.00	286.0	204.3	467.4	1530.8	1585.3	0.730	48.119	180.7	953.1	0.833	35.88	1930.	7

PROYECTO MARA340

1	1	288.9	1.00	288.9	35.2	84.7	66.4	458.7	0.708	26.864	6.7	72.8	0.374	16.26	859.	4
2	1	288.9	1.00	288.9	83.2	200.4	414.5	829.4	0.709	20.739	41.1	146.6	0.318	13.83	732.	4
3	1	288.9	1.00	288.9	118.4	285.2	848.9	960.7	0.725	21.546	84.8	244.2	0.367	15.83	836.	6
4	1	288.9	1.00	288.9	58.6	141.2	110.7	764.6	0.708	59.230	13.9	246.9	0.767	33.36	1763.	6
5	1	288.9	1.00	288.9	101.7	245.2	507.1	1014.7	0.709	34.433	56.0	297.8	0.528	22.95	1213.	8
6	1	288.9	1.00	288.9	133.4	321.4	956.6	1082.7	0.725	29.247	102.2	373.5	0.498	21.48	1162.	6
7	1	288.9	1.00	288.9	85.6	206.2	161.6	1116.5	0.708	80.484	22.1	494.0	1.042	45.33	2395.	7
8	1	288.9	1.00	288.9	128.7	310.2	641.6	1283.8	0.709	48.865	77.7	534.7	0.749	32.57	1724.	7
9	1	288.9	1.00	288.9	160.4	386.4	1150.1	1301.7	0.725	39.007	133.3	548.9	0.664	28.65	1530.	7

PROYECTO MARA350

1	1	294.7	1.00	294.7	26.3	64.6	64.8	335.4	0.708	27.805	6.5	55.1	0.371	16.15	834.	3
2	1	294.7	1.00	294.7	52.6	129.3	217.3	583.8	0.708	23.629	21.7	102.6	0.345	15.02	794.	4
3	1	294.7	1.00	294.7	88.0	216.4	529.6	769.1	0.717	18.521	59.4	155.8	0.307	13.28	711.	4
4	1	294.7	1.00	294.7	136.2	334.7	1472.0	820.8	0.782	18.247	146.7	293.6	0.356	15.02	877.	6

PROYECTO MARA370

1	1	338.0	1.00	338.0	39.5	111.4	114.4	575.9	0.708	25.147	11.4	86.3	0.337	14.66	774.	4
2	1	338.0	1.00	338.0	65.8	185.4	439.4	715.6	0.711	21.747	43.9	147.6	0.346	15.01	747.	4
3	1	338.0	1.00	338.0	92.1	259.7	868.8	808.7	0.738	23.491	86.8	255.0	0.415	17.83	982.	6

PROYECTO MARA380

1	1	330.6	1.00	330.6	21.8	60.1	93.6	279.1	0.708	33.296	9.6	66.2	0.479	20.83	1101.	3
2	1	330.6	1.00	330.6	61.5	169.6	422.9	635.4	0.712	18.027	42.7	113.8	0.291	12.62	671.	4
3	1	330.6	1.00	330.6	87.8	242.2	893.3	699.1	0.751	15.613	89.9	165.4	0.285	12.19	683.	5
4	1	320.6	1.00	320.6	114.5	306.1	1613.9	568.5	0.814	13.724	162.4	222.1	0.286	11.94	726.	5

KAL	IK	QM	ICF	QT	HN	PI	EP	ES	FP	FEC	PG	INVERSIUN	FEC1	CESP	KESP	DUR
(-)	(-)	(M/S)	(-)	(M/S)	(M)	(MM)	(GWH)	(GWH)	(-)	(\$/MWH)	(MM)	(10 \$)	(-)	(\$/MWH)	(\$/KW)	(ANOS)
PROYECTO MARA390																
1	1	339.5	1.00	339.5	52.8	149.4	374.7	557.8	0.713	21.838	37.5	121.7	0.353	15.31	814.	4
2	1	339.5	1.00	339.5	74.9	212.0	740.2	639.7	0.743	19.421	74.7	175.5	0.348	14.92	828.	5
3	1	339.5	1.00	339.5	114.5	324.2	1846.6	445.0	0.807	18.425	185.8	525.0	0.398	16.64	1005.	7
4	1	339.5	1.00	339.5	114.7	324.9	814.7	1213.0	0.713	58.442	108.4	708.1	0.944	40.96	2180.	7
5	1	339.5	1.00	339.5	134.6	381.0	1330.0	1149.4	0.743	45.914	169.7	745.6	0.824	35.27	1957.	7
6	1	339.5	1.00	339.5	170.0	461.4	2742.3	660.8	0.807	32.597	330.2	848.7	0.700	29.25	1763.	7
7	1	339.5	1.00	339.5	168.7	477.7	1197.8	1783.4	0.713	65.570	170.2	1168.0	1.059	45.96	2445.	7
8	1	339.5	1.00	339.5	188.5	533.8	1863.4	1610.3	0.743	52.675	255.7	1198.3	0.945	40.47	2245.	7
9	1	339.5	1.00	339.5	224.0	634.2	3612.6	870.5	0.807	37.517	470.4	1294.6	0.611	35.87	2041.	7
PROYECTO MARA400																
1	1	345.9	1.00	345.9	30.6	88.4	84.2	463.7	0.708	28.065	6.3	75.6	0.372	16.19	855.	4
2	1	345.9	1.00	345.9	83.5	240.7	808.3	747.9	0.738	19.597	80.3	147.5	0.347	14.89	820.	5
3	1	345.9	1.00	345.9	105.8	569.7	1822.0	1831.1	0.752	14.532	162.6	339.2	0.253	10.89	525.	6
4	1	345.9	1.00	345.9	145.2	418.8	2639.0	371.6	0.821	18.287	264.2	440.4	0.413	17.16	1051.	7
5	1	345.9	1.00	345.9	117.4	358.7	322.6	1776.4	0.708	72.123	46.7	744.5	0.957	41.60	2190.	7
6	1	345.9	1.00	345.9	164.7	475.1	1595.2	1476.1	0.738	41.311	207.1	821.8	0.731	31.38	1730.	7
7	1	345.9	1.00	345.9	184.5	532.3	2333.4	1309.5	0.781	35.320	294.5	899.8	0.667	28.97	1690.	7
8	1	345.9	1.00	345.9	220.0	634.6	3998.5	563.0	0.821	28.322	483.3	1033.4	0.639	26.57	1628.	7
PROYECTO MARA410																
1	1	360.6	1.00	360.6	52.8	158.7	240.1	743.6	0.708	21.377	24.0	111.5	0.306	13.30	703.	4
2	1	360.6	1.00	360.6	88.1	265.0	732.1	934.2	0.718	20.270	73.6	207.2	0.337	14.59	782.	5
3	1	360.6	1.00	360.6	118.8	357.3	1364.5	1000.3	0.756	21.281	156.6	338.3	0.394	16.78	947.	7
4	1	360.6	1.00	360.6	110.2	331.5	501.6	1553.3	0.708	75.412	66.2	821.6	1.079	46.91	2479.	7
5	1	360.6	1.00	360.6	141.9	426.7	1179.0	1504.4	0.718	53.622	145.8	862.8	0.891	38.59	2089.	7
6	1	360.6	1.00	360.6	169.4	509.3	1945.3	1426.1	0.756	42.136	230.2	954.9	0.780	35.22	1875.	7
PROYECTO MARA420																
1	1	368.3	1.00	368.3	61.7	189.5	263.2	911.4	0.708	21.803	26.6	133.6	0.307	13.34	705.	4
2	1	368.3	1.00	368.3	149.5	459.2	1953.1	1164.8	0.775	21.032	194.7	454.6	0.405	17.10	990.	7
PROYECTO MARA430																
1	1	387.9	1.00	387.9	26.4	85.3	78.5	450.3	0.708	27.532	7.4	71.5	0.363	15.81	655.	4
2	1	387.9	1.00	387.9	88.1	285.1	979.5	870.6	0.741	16.459	98.7	198.5	0.294	12.59	646.	5
3	1	387.9	1.00	387.9	175.9	569.2	3827.8	417.0	0.852	16.792	382.0	577.8	0.388	15.97	1015.	7
PROYECTO MARA440																
1	1	428.8	1.00	428.8	88.1	315.2	899.3	1090.6	0.721	15.072	90.7	185.6	0.253	10.94	569.	5
2	1	428.8	1.00	428.8	114.6	409.7	1563.0	1148.5	0.756	13.490	157.3	245.8	0.250	10.63	600.	6
3	1	428.8	1.00	428.8	176.0	629.4	3980.5	553.4	0.823	12.071	397.3	438.1	0.273	11.33	696.	7
PROYECTO MARA450																
1	1	455.1	1.00	455.1	79.2	300.7	692.1	1179.1	0.710	19.815	69.3	216.5	0.312	13.57	720.	5
2	1	455.1	1.00	455.1	167.4	635.5	3264.4	1248.7	0.811	19.347	328.2	641.4	0.400	16.67	1009.	7
PROYECTO MARA460																
1	1	463.9	1.00	463.9	43.9	169.8	331.1	722.4	0.708	21.019	32.7	124.1	0.318	13.81	731.	4
2	1	463.9	1.00	463.9	123.2	476.5	2847.1	523.0	0.807	19.685	283.7	521.7	0.435	18.16	1095.	7
3	1	463.9	1.00	463.9	211.4	817.8	6448.8	126.1	0.918	24.568	646.0	1363.9	0.604	24.33	1668.	7
PROYECTO MARA470																
1	1	541.1	1.00	541.1	43.9	198.1	410.3	819.8	0.709	19.738	40.5	138.0	0.303	13.16	697.	5
2	1	541.1	1.00	541.1	88.2	398.0	1620.3	1052.3	0.767	15.026	163.4	275.0	0.285	12.07	691.	6
3	1	541.1	1.00	541.1	167.5	756.0	5292.6	466.0	0.870	15.942	532.2	751.0	0.374	15.30	993.	7

KAL	IK	QM	ICF	QT	HM	PI	EP	ES	FP	FEC	PG	INVERSION	FEC1	CESP	KESP	DUR
(-)	(-)	(M/S)	(-)	(M/S)	(M)	(MW)	(GWH)	(GWH)	(-)	(\$/MWH)	(MW)	(10 \$)	(-)	(\$/MWH)	(\$/KW)	(ANOS)
PROYECTO MARAS00																
1	1	893.7	1.00	893.7	35.7	265.8	567.9	1083.0	0.709	23.274	56.2	220.1	0.360	15.64	823.	7
2	1	893.7	1.00	893.7	114.6	854.0	5318.5	778.2	0.815	10.220	555.5	497.3	0.230	9.57	582.	7
3	1	893.7	1.00	893.7	158.5	1181.3	8537.0	603.5	0.883	8.730	855.0	657.8	0.207	8.44	557.	7
4	1	893.7	1.00	893.7	35.7	265.8	567.9	1083.0	0.709	23.225	56.2	219.7	0.359	15.61	826.	7
5	1	893.7	1.00	893.7	114.6	854.0	5318.5	778.2	0.815	11.273	555.5	548.5	0.254	10.55	642.	7
6	1	893.7	1.00	893.7	158.5	1181.3	8537.0	603.5	0.883	10.403	855.0	783.9	0.247	10.06	664.	7
PROYECTO MARAS20																
1	1	901.1	1.00	901.1	20.5	152.8	141.3	805.7	0.708	34.445	13.6	159.8	0.455	19.79	1046.	6
2	1	901.1	1.00	901.1	134.7	1012.5	6723.4	778.1	0.846	10.905	673.4	661.2	0.251	10.34	653.	7
3	1	901.1	1.00	901.1	178.7	1342.6	10190.9	455.7	0.904	10.405	1017.2	923.2	0.252	10.19	688.	7
4	1	901.1	1.00	901.1	20.5	152.8	141.3	805.7	0.708	26.465	13.6	122.9	0.350	15.22	804.	5
5	1	901.1	1.00	901.1	134.7	1022.1	6787.0	785.5	0.846	12.082	673.4	739.6	0.278	11.46	724.	7
6	1	901.1	1.00	901.1	178.7	1355.4	10200.9	459.8	0.904	12.813	1032.7	1147.7	0.310	12.55	847.	7
PROYECTO MARAS40																
1	1	965.0	1.00	965.0	55.0	205.0	499.9	1143.9	0.708	25.866	51.3	256.6	0.388	16.88	893.	7
2	1	965.0	1.00	965.0	148.1	1189.3	8491.2	657.2	0.878	12.299	651.6	924.8	0.291	11.86	777.	7
3	1	965.0	1.00	965.0	192.5	1544.2	12468.2	160.6	0.933	12.604	1297.9	1569.8	0.317	12.72	866.	7
4	1	965.0	1.00	965.0	55.0	205.0	499.9	1143.9	0.708	20.024	51.3	163.0	0.300	13.06	690.	6
5	1	965.0	1.00	965.0	148.1	1191.3	8504.0	658.2	0.878	16.167	653.1	1217.5	0.382	15.59	1022.	7
6	1	965.0	1.00	965.0	192.5	1550.1	12499.7	161.0	0.933	18.219	1263.0	1954.0	0.451	18.10	1261.	7
PROYECTO MARAS40																
1	1	974.0	1.00	974.0	25.0	205.1	206.0	972.6	0.708	27.862	29.5	183.5	0.393	17.10	903.	6
2	1	974.0	1.00	974.0	45.2	367.3	1022.3	1289.5	0.719	20.637	102.6	293.3	0.344	14.88	799.	7
3	1	974.0	1.00	974.0	160.7	1305.4	9979.9	382.5	0.906	11.174	1007.9	968.9	0.271	10.97	742.	7
4	1	974.0	1.00	974.0	205.0	1665.1	113890.1	49.9	0.956	11.779	1397.6	1397.4	0.295	11.76	839.	7
5	1	974.0	1.00	974.0	25.0	203.1	286.0	972.6	0.708	21.562	29.5	142.1	0.305	15.24	700.	5
6	1	974.0	1.00	974.0	45.3	368.3	1024.9	1292.9	0.719	17.290	103.2	246.4	0.288	12.47	669.	6
7	1	974.0	1.00	974.0	161.0	1307.8	9998.3	383.0	0.906	16.536	1010.8	1436.5	0.401	16.23	1096.	7
8	1	974.0	1.00	974.0	205.3	1668.0	13914.1	50.0	0.936	18.963	1401.5	2253.4	0.475	18.93	1351.	7
PROYECTO MARAS50																
1	1	988.0	1.00	988.0	25.0	206.0	338.0	938.8	0.708	27.597	34.9	190.0	0.401	17.45	922.	6
2	1	988.0	1.00	988.0	37.3	307.0	670.6	1236.6	0.709	24.571	67.5	270.0	0.382	16.61	879.	7
3	1	988.0	1.00	988.0	57.9	477.0	1618.2	1470.8	0.739	17.503	166.2	351.2	0.311	13.34	736.	7
4	1	988.0	1.00	988.0	173.1	1426.1	111378.1	182.5	0.926	11.830	1145.0	1156.7	0.292	11.74	811.	7
5	1	988.0	1.00	988.0	25.0	206.0	338.0	938.8	0.708	20.310	34.9	139.8	0.295	12.84	679.	5
6	1	988.0	1.00	988.0	37.3	307.6	671.8	1258.9	0.709	18.075	67.7	199.0	0.281	12.22	647.	6
7	1	988.0	1.00	988.0	56.0	477.9	1621.3	1473.6	0.739	15.153	166.7	304.6	0.269	11.55	637.	6
8	1	988.0	1.00	988.0	173.3	1426.3	11395.5	182.8	0.926	17.315	1147.8	1695.6	0.427	17.18	1183.	7
PROYECTO MARAS60																
1	1	1093.0	1.00	1093.0	42.7	388.9	998.8	1430.9	0.713	19.447	100.6	284.2	0.316	13.72	731.	7
2	1	1093.0	1.00	1093.0	54.9	500.5	1629.7	1589.2	0.734	16.733	162.2	345.8	0.293	12.60	691.	7
3	1	1093.0	1.00	1093.0	75.5	688.7	3152.4	1613.9	0.790	13.182	319.7	445.0	0.261	10.95	646.	7
4	1	1093.0	1.00	1093.0	190.7	1738.6	14555.1	48.4	0.959	10.581	1460.2	1315.1	0.265	10.56	756.	7
5	1	1093.0	1.00	1093.0	42.7	388.9	998.8	1430.9	0.713	14.698	100.6	214.8	0.239	10.37	552.	6
6	1	1093.0	1.00	1093.0	55.0	501.4	1632.5	1591.9	0.734	12.915	162.6	267.4	0.226	9.73	533.	7
7	1	1093.0	1.00	1093.0	75.7	689.8	3157.4	1616.4	0.790	11.087	320.6	374.8	0.219	9.21	543.	7
8	1	1093.0	1.00	1093.0	191.0	1741.1	14575.8	48.5	0.959	13.762	1463.5	1712.9	0.345	13.74	988.	7

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KAL IK QM ICF QT HN PI EP ES FP FEC PG INVERSION FEC1 CESP KESP OOR
3 3
(-) (-) (M/S) (-) (M/S) (M) (MM) (GWH) (GWH) (-) ($/MWH) (MWH) (10 $) (-) ($/MWH) ($/KW) (AÑOS)
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PROYECTO MARA570

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1 1 2177.0 1.00 2177.0 36.3 659.7 2608.8 1788.8 0.761 20.480 258.4 611.6 0.384 16.31 927. 7
2 1 2177.0 1.00 2177.0 53.8 976.1 5772.7 1129.8 0.807 14.570 584.2 787.2 0.320 13.38 806. 7
3 1 2177.0 1.00 2177.0 65.9 1196.6 7968.8 909.9 0.847 12.493 797.1 897.2 0.288 11.85 750. 7
4 1 2177.0 1.00 2177.0 90.5 1643.512669.3 420.7 0.909 10.169 1274.9 1116.6 0.248 10.01 679. 7
5 1 2177.0 1.00 2177.0 110.7 2009.316733.2 62.3 0.954 9.147 1673.3 1307.3 0.229 9.13 651. 7
6 1 2177.0 1.00 2177.0 36.3 659.7 2608.8 1788.8 0.761 20.642 258.4 616.5 0.387 16.44 935. 7
7 1 2177.0 1.00 2177.0 53.8 976.1 5772.7 1129.8 0.807 14.852 584.2 802.5 0.326 13.64 822. 7
8 1 2177.0 1.00 2177.0 65.9 1196.6 7968.8 909.9 0.847 12.850 797.1 922.8 0.296 12.19 771. 7
9 1 2177.0 1.00 2177.0 90.5 1643.512669.3 420.7 0.909 11.000 1274.9 1207.8 0.268 10.82 735. 7
10 1 2177.0 1.00 2177.0 110.7 2009.316733.2 62.3 0.954 10.129 1673.3 1447.6 0.253 10.11 720. 7
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PROYECTO VIZCA10

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=====
1 1 15.6 1.00 15.6 228.2 29.8 68.9 81.0 0.575 111.797 10.3 104.2 1.746 81.58 3500. 5
2 1 15.6 1.00 15.6 248.0 32.4 91.6 76.7 0.593 109.619 13.3 121.4 1.833 84.64 3751. 5
3 1 15.6 1.00 15.6 287.3 37.5 150.2 59.3 0.638 123.470 20.7 189.3 2.359 106.00 5048. 5
4 1 15.6 1.00 15.6 286.6 37.4 86.5 101.8 0.575 111.436 13.1 130.5 1.740 81.32 3489. 5
5 1 15.6 1.00 15.6 306.4 40.0 113.2 94.7 0.593 109.129 16.7 149.3 1.825 84.26 3734. 5
6 1 15.6 1.00 15.6 345.7 45.1 180.7 71.3 0.638 118.328 25.6 218.3 2.256 101.58 4638. 5
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PROYECTO PUCH10

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=====
1 1 15.4 1.00 15.4 223.7 28.7 64.5 89.8 0.614 91.111 9.6 85.0 1.416 64.61 2960. 4
2 1 15.4 1.00 15.4 243.5 31.3 96.3 78.8 0.639 93.123 13.9 107.7 1.604 72.16 3444. 4
3 1 15.4 1.00 15.4 282.8 36.3 169.2 55.0 0.705 169.603 23.2 284.4 3.417 148.79 7832. 7
4 1 15.4 1.00 15.4 277.6 35.7 80.1 111.5 0.614 94.244 12.1 109.2 1.465 66.83 3061. 5
5 1 15.4 1.00 15.4 297.4 38.2 117.6 96.3 0.639 93.823 17.4 132.6 1.616 72.70 3470. 5
6 1 15.4 1.00 15.4 336.7 43.2 201.5 65.5 0.705 153.595 28.4 306.8 3.094 134.75 7093. 7
7 1 15.4 1.00 15.4 322.6 41.4 93.1 129.5 0.614 91.399 14.2 123.0 1.420 64.81 2969. 5
8 1 15.4 1.00 15.4 342.4 44.0 135.4 110.9 0.639 90.203 20.2 146.7 1.554 69.90 3336. 5
9 1 15.4 1.00 15.4 381.7 49.0 228.4 74.3 0.705 142.303 32.8 322.2 2.867 124.84 6571. 7
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PROYECTO PUCH20

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=====
1 1 28.8 1.00 28.8 276.1 66.3 77.6 276.7 0.610 91.557 12.5 168.6 1.221 55.81 2542. 6
2 1 28.8 1.00 28.8 306.4 73.6 147.1 246.9 0.611 76.578 22.4 176.6 1.151 52.59 2400. 6
3 1 28.8 1.00 28.8 353.7 85.0 291.3 193.9 0.652 65.715 42.0 217.5 1.177 52.59 2560. 6
4 1 28.8 1.00 28.8 319.3 76.7 89.7 320.0 0.610 105.574 14.5 224.8 1.407 64.35 2931. 7
5 1 28.8 1.00 28.8 349.6 84.0 167.8 281.6 0.611 88.520 25.7 232.9 1.330 60.78 2774. 7
6 1 28.8 1.00 28.8 396.8 95.3 326.9 217.5 0.652 75.555 47.8 280.6 1.353 60.46 2944. 7
7 1 28.8 1.00 28.8 363.3 87.3 102.1 364.2 0.610 115.386 16.5 279.6 1.538 70.33 3204. 7
8 1 28.8 1.00 28.8 393.6 94.5 189.0 317.1 0.611 97.253 29.1 288.1 1.462 66.78 3048. 7
9 1 28.8 1.00 28.8 440.9 105.9 363.2 241.7 0.652 80.745 53.6 333.2 1.446 64.61 3146. 7
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PROYECTO YANA10

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=====
1 1 32.0 1.00 32.0 175.1 46.7 88.2 216.6 0.745 60.941 12.8 102.1 0.918 39.28 2184. 5
2 1 32.0 1.00 32.0 214.7 57.3 135.0 239.3 0.746 66.186 18.4 143.7 1.053 45.03 2507. 5
3 1 32.0 1.00 32.0 274.9 73.4 138.4 340.1 0.745 65.599 20.9 172.5 0.988 42.29 2351. 6
4 1 32.0 1.00 32.0 314.5 83.9 197.7 350.5 0.746 68.224 28.5 216.9 1.085 46.42 2584. 6
5 1 32.0 1.00 32.0 361.2 96.4 181.9 446.9 0.745 84.236 27.9 291.1 1.269 54.30 3019. 7
6 1 32.0 1.00 32.0 400.9 107.0 252.0 446.7 0.746 83.610 37.3 338.8 1.330 56.88 3167. 7
7 1 32.0 1.00 32.0 390.9 104.3 196.8 483.6 0.745 98.237 30.3 367.3 1.480 63.33 3521. 7
8 1 32.0 1.00 32.0 430.6 114.9 270.7 479.8 0.746 67.730 40.3 294.8 1.077 46.08 2566. 7
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PROYECTO YANA20

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=====
1 1 37.2 1.00 37.2 113.3 35.2 61.7 167.6 0.745 101.721 9.9 126.2 1.508 64.54 3589. 5
2 1 37.2 1.00 37.2 173.8 53.9 141.0 212.0 0.747 76.221 17.9 160.5 1.247 53.33 2976. 5
3 1 37.2 1.00 37.2 138.5 43.0 75.4 204.8 0.745 164.419 12.2 249.2 2.438 104.33 5800. 7
4 1 37.2 1.00 37.2 203.5 63.1 165.0 248.2 0.747 112.336 21.8 276.9 1.839 78.60 4386. 7
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CUENCA DEL RIO : SMARANDU

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*   PROYECTO   ALTERN.   ALTERN.   *
*               TOTALES ELIMINADAS *
* ===== *
* MARA  50      6         0         *
* MARA  60      2         0         *
* MARA  80      4         0         *
* MARA  90      6         0         *
* MARA 110      4         0         *
* MARA 120      6         0         *
* MARA 130     12         0         *
* MARA 140      4         0         *
* MARA 150      6         0         *
* MARA 160      6         0         *
* MARA 180      6         0         *
* MARA 190      5         0         *
* MARA 200      3         0         *
* MARA 210      3         0         *
* MARA 230      6         0         *
* MARA 240      5         0         *
* MARA 250      9         0         *
* MARA 260      6         0         *
* MARA 290      9         0         *
* MARA 300      8         0         *
* MARA 320      9         0         *
* MARA 330      9         0         *
* MARA 340      9         0         *
* MARA 350      4         0         *
* MARA 370      3         0         *
* MARA 380      4         0         *
* MARA 390      9         0         *
* MARA 400      5         0         *
* MARA 410      5         0         *
* MARA 420      2         0         *
* MARA 430      3         0         *
* MARA 440      3         0         *
* MARA 450      2         0         *
* MARA 460      3         0         *
* MARA 470      3         0         *
* MARA 500      6         3         *
* MARA 520      6         3         *
* MARA 530      5         3         *
* MARA 540      8         4         *
* MARA 550      8         4         *
* MARA 560      5         4         *
* MARA 570     10         0         *
* VIZCA 10      6         0         *
* PUJCH 10      9         0         *
* PUJCH 20      9         0         *
* YANA  10      8         0         *
* YANA  20      4         0         *
* UTC   30      3         0         *
* UTC   50      2         0         *
* UTC   60      1         0         *
* UTC   70      1         0         *
*****

```

VINCULOS EXTERNOS

V VIZCA 1 → MARA 80-1,3
 MARA 90-2,4,6
 V VIZCA 2 → MARA 80-2,4

①

②

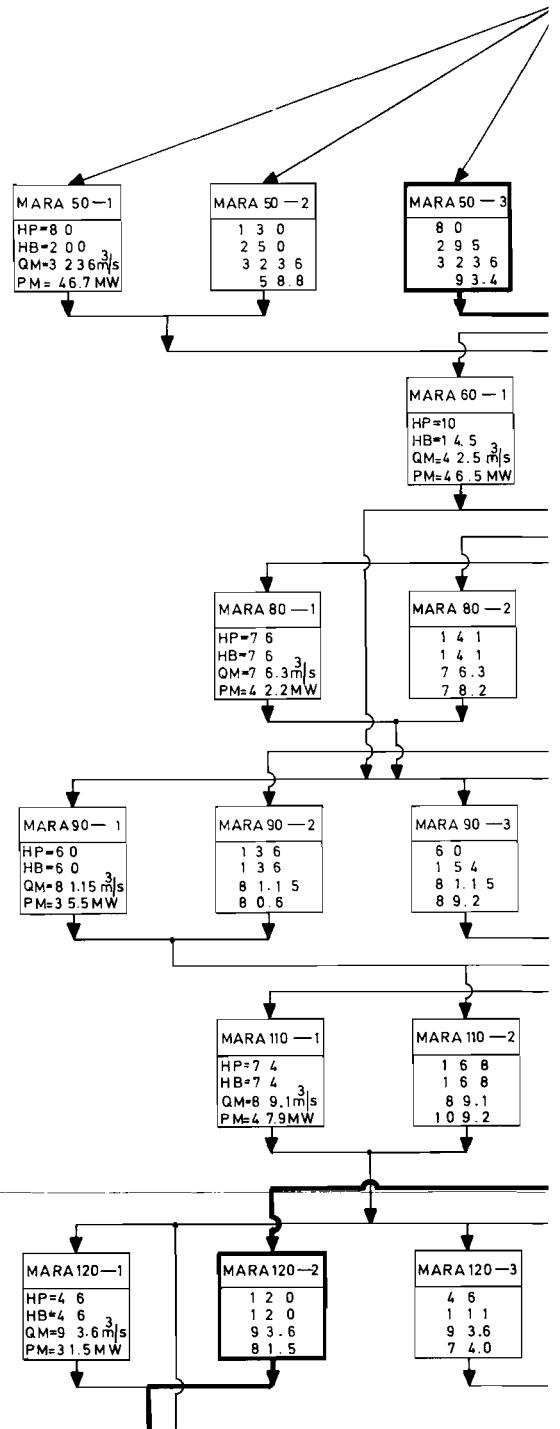
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④

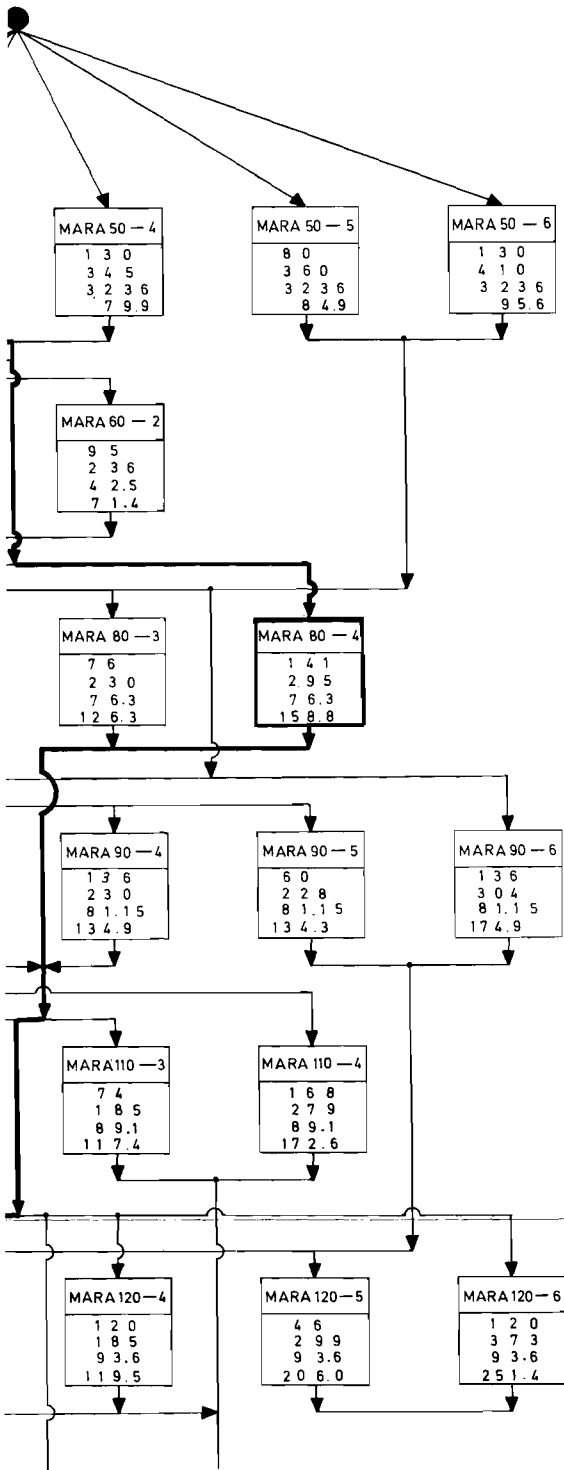
⑤

⑥

A



MARAÑON

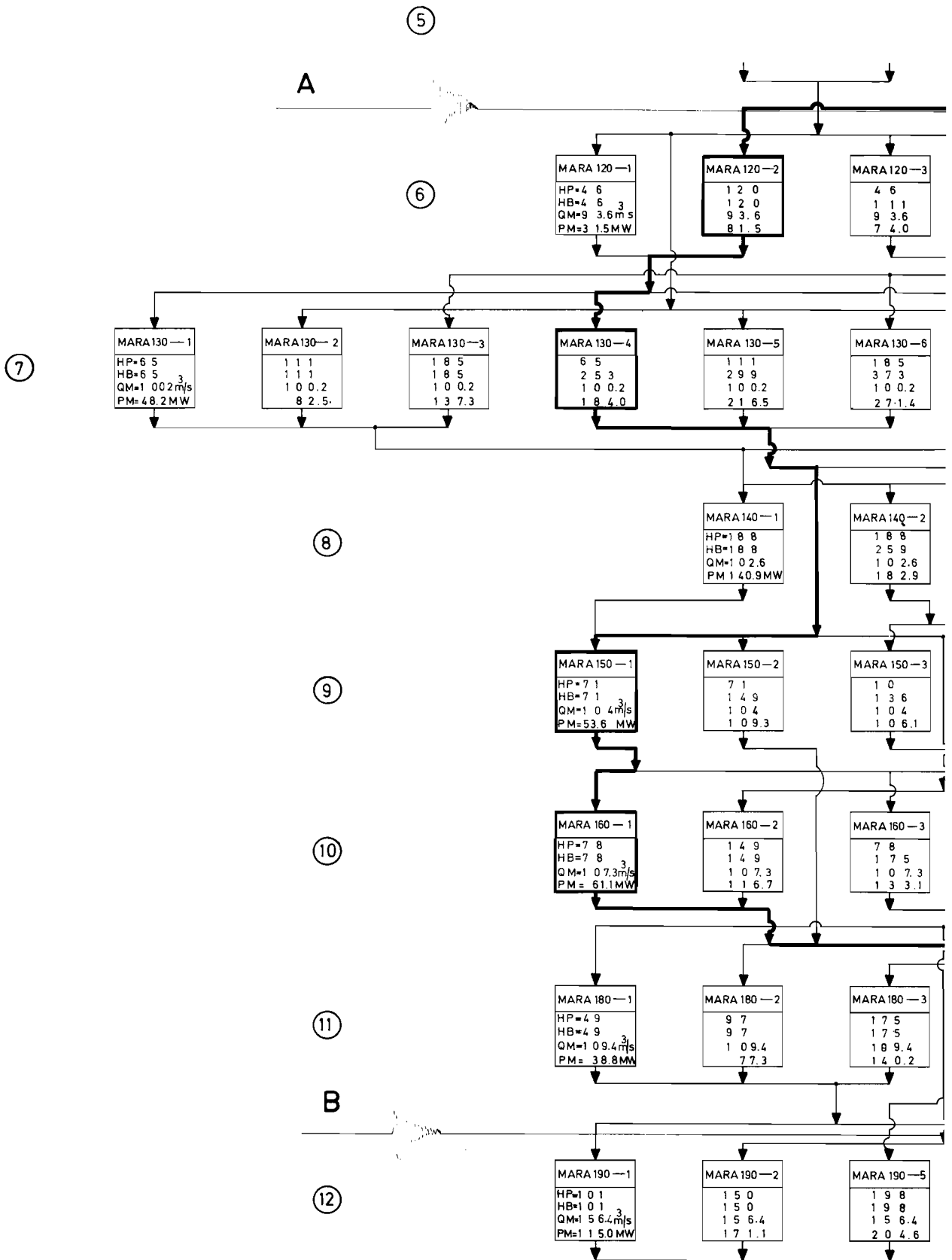


LEYENDA - KEY

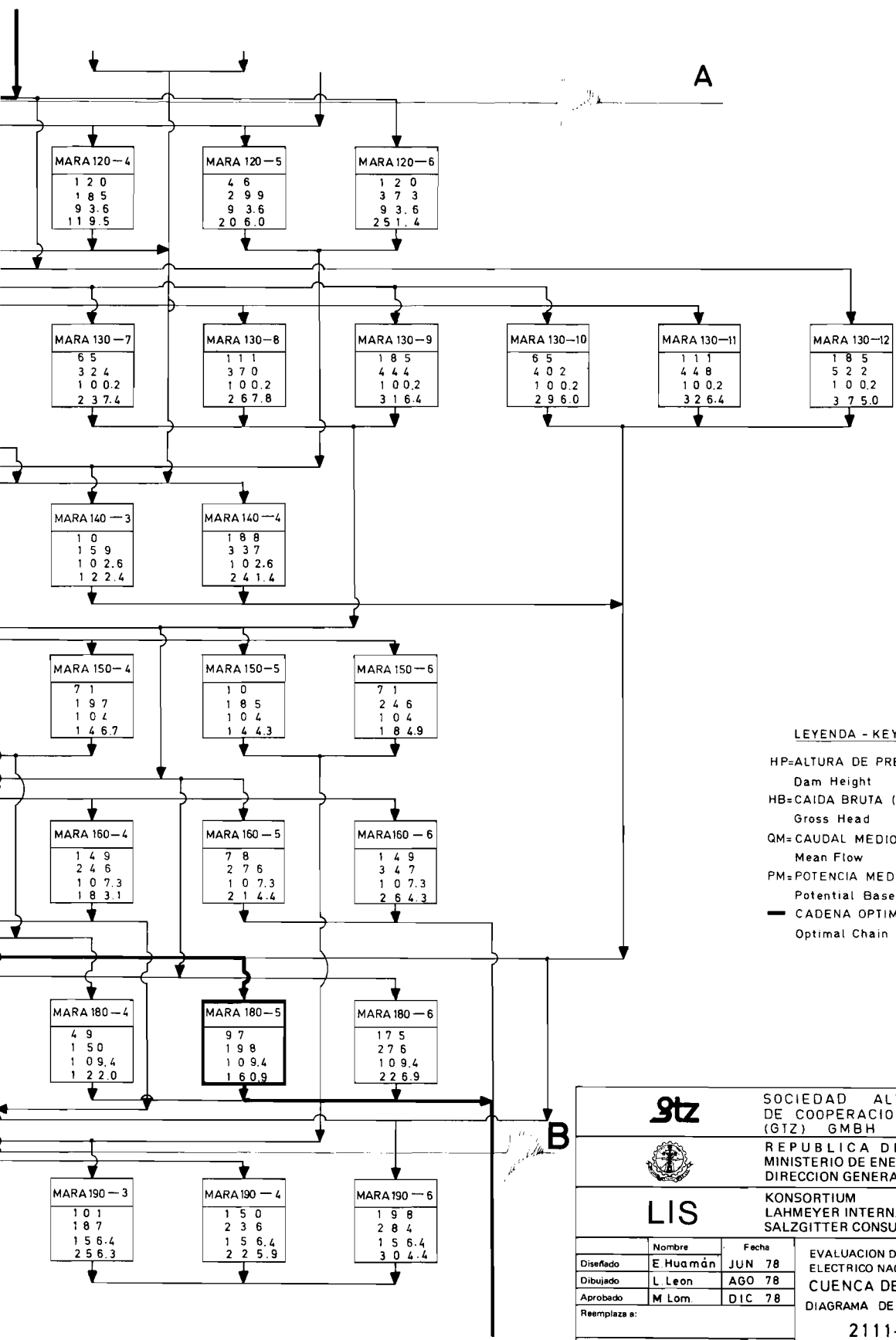
- HP= ALTURA DE PRESA (m)
Dam Height
- HB= CAIDA BRUTA (m)
Gross Head
- QM= CAUDAL MEDIO m^3/s
Mean Flow
- PM= POTENCIA MEDIA
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

A

		SOCIEDAD ALEMANA DE COOPERACION TECNICA (GTZ) GMBH	
		REPUBLICA DEL PERU MINISTERIO DE ENERGIA Y MINAS DIRECCION GENERAL DE ELECTRICIDAD	
LIS		KONSORTIUM LAHMEYER INTERNATIONAL GMBH SALZGITTER CONSULT GMBH	
Nombre	Fecha	EVALUACION DEL POTENCIAL HIDRO-ELECTRICO NACIONAL CUENCA DEL RIO-Basin of River: DIAGRAMA DE CADENAS-Chains Diagram 2111-MARAÑON	
Diseñado	L. Leon JUN-78		
Dibujado	E. Huamán AGO-78		
Aprobado	M. Lom. DIC-78		
Reemplaza a:			
Reemplazado por:			
Reg. No.	2 111-19	Escala	Dibujo Nr.



RAÑON



LEYENDA - KEY

HP=ALTURA DE PRESA (m)
Dam Height

HB=CAIDA BRUTA (m)
Gross Head

QM=CAUDAL MEDIO m³/s
Mean Flow

PM=POTENCIA MEDIA (MW)
Potential Based on Mean Flow

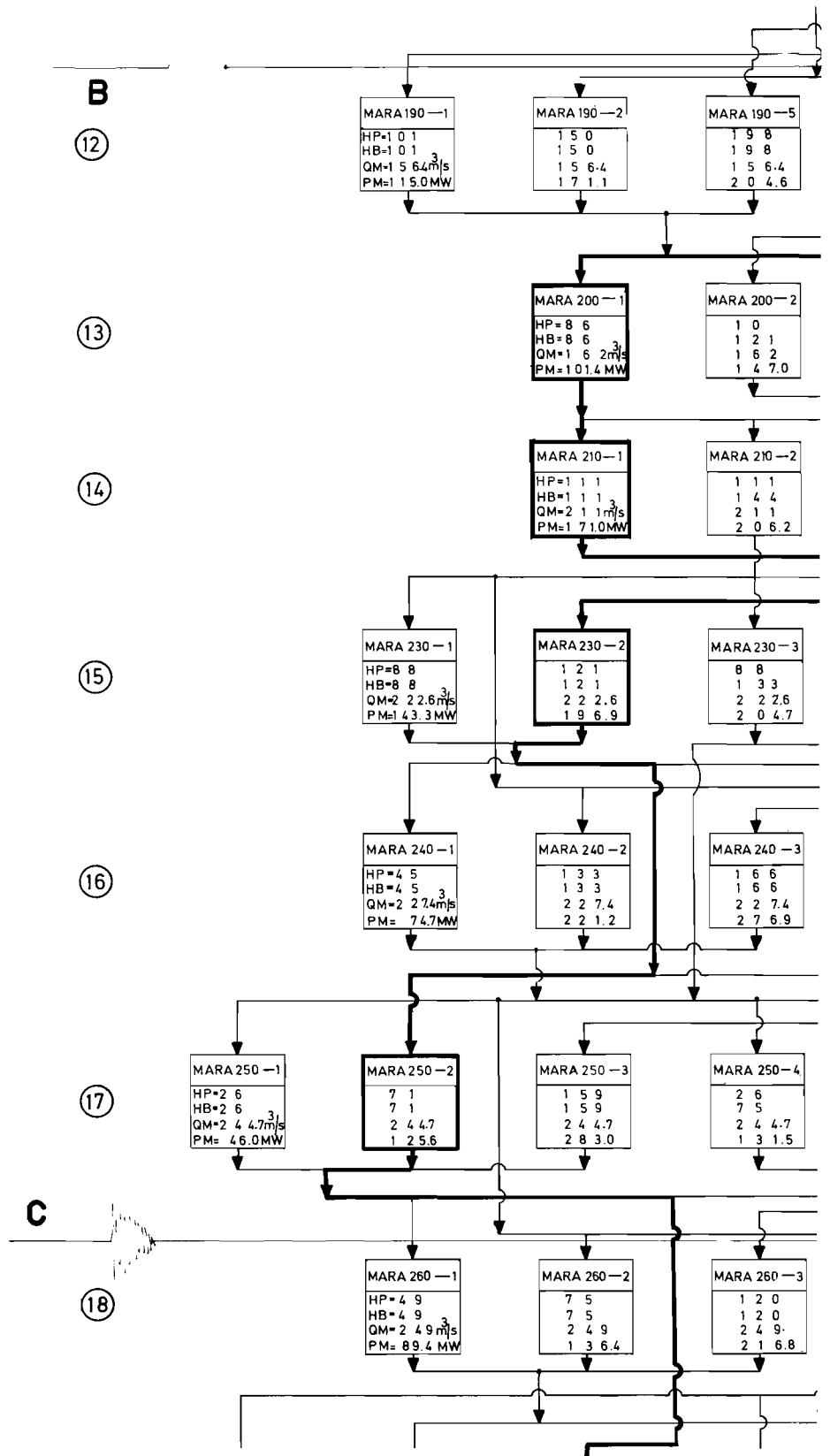
— CADENA OPTIMA
Optimal Chain

		SOCIEDAD ALEMANA DE COOPERACION TECNICA (GIZ) GMBH	
		REPUBLICA DEL PERU MINISTERIO DE ENERGIA Y MINAS DIRECCION GENERAL DE ELECTRICIDAD	
LIS		KONSORTIUM LAHMEYER INTERNATIONAL GMBH SALZGITTER CONSULT GMBH	
Nombre	E. Huamán	Fecha	JUN 78
Diseñado	L. Leon		AGO 78
Dibujado	M. Lom		DIC 78
Aprobado			
Reemplaza a:			
Reemplazado por			
Reg. No.	2111-20	Escala	
		Dibujo Nr.	

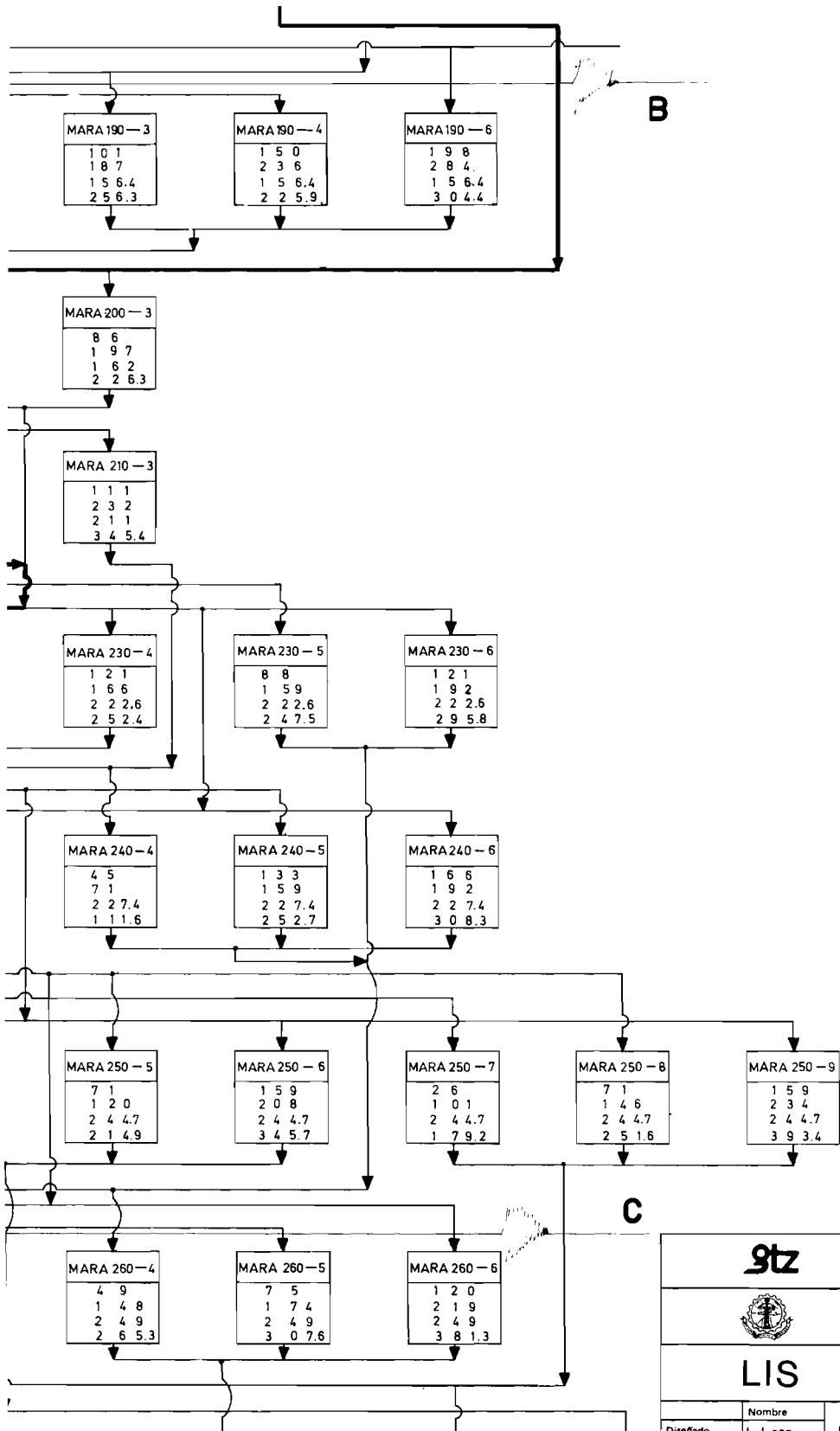
EVALUACION DEL POTENCIAL HIDRO-ELECTRICO NACIONAL
CUENCA DEL RIO-Basin of River:
DIAGRAMA DE CADENAS-Chains Diagram
2111-MARAÑON

VINCULOS EXTERNOS

- V PUCH 3 → MARA 190 - 1,3
- V PUCH 2 → MARA 190 - 2,4
- V PUCH 1 → MARA 190 - 5,6
- V YANA 1 → MARA 210 - 1,2,3
- V YANA 2 → MARA 230 - 2,4,6
- MARA 240 - 3,6
- V YANA 3 → MARA 230 - 1,3,5
- MARA 240 - 2,5
- MARA 250 - 3,6,9



ARAÑON



		SOCIEDAD ALEMANA DE COOPERACION TECNICA (GTZ) GMBH	
		REPUBLICA DEL PERU MINISTERIO DE ENERGIA Y MINAS DIRECCION GENERAL DE ELECTRICIDAD	
LIS		KONSORTIUM LAHMEYER INTERNATIONAL GMBH SALZGITTER CONSULT GMBH	
Diseñado: L. Leon		Fecha: JUN-78	
Dibujado: E. Huamán		AGO-78	
Aprobado: M. Lom.		DIC-78	
Reemplaza a:		EVALUACION DEL POTENCIAL HIDRO-ELECTRICO NACIONAL	
Reemplazado por:		CUENCA DEL RIO-Basin of River:	
Reg. No. 2111-21		DIBRAMA DE CADENAS - Chains Diagram	
		2111-MARAÑON	
Escala		Dibujo Nr.	

(18)

(19)

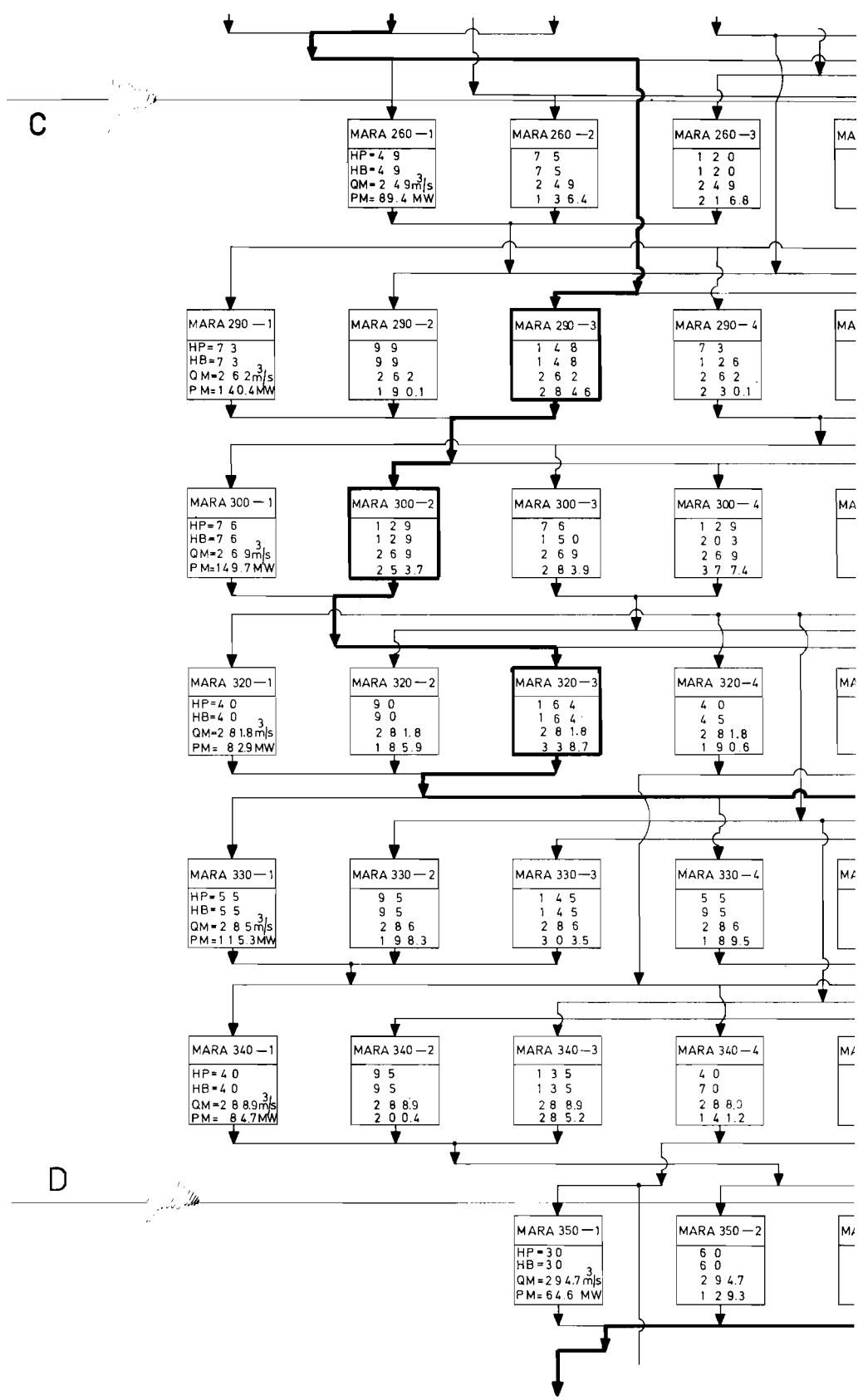
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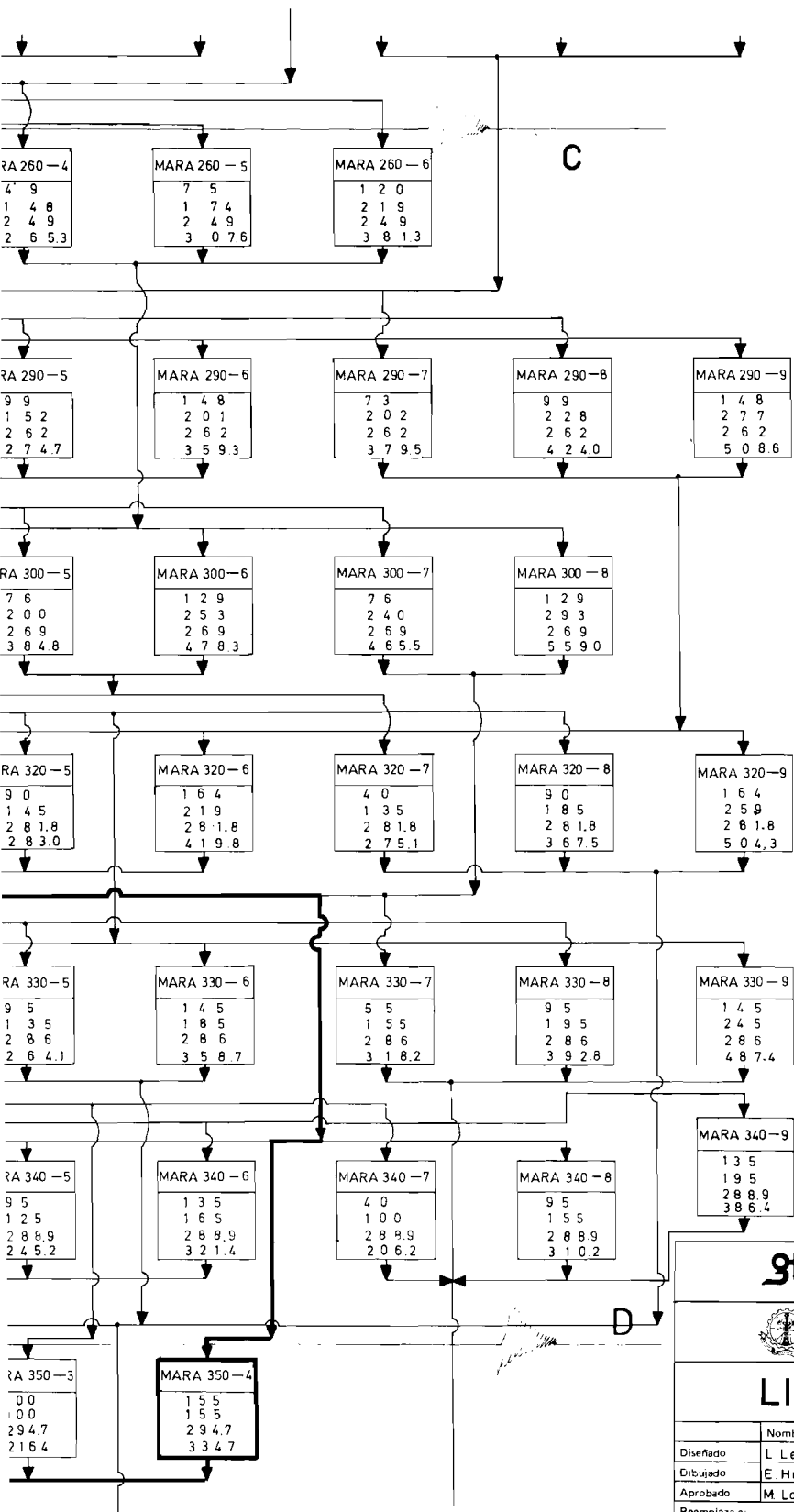
(22)

(23)

(24)



MARAÑON



LEYENDA - KEY

- HP=ALTURA DE PRESA (m)
Dam Height
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Gross Head
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Mean Flow
- PM=POTENCIA MEDIA (MW)
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

SOCIEDAD ALEMANA DE COOPERACION TECNICA (GTZ) GMBH									
REPUBLICA DEL PERU MINISTERIO DE ENERGIA Y MINAS DIRECCION GENERAL DE ELECTRICIDAD									
LIS KONSORTIUM LAHMEYER INTERNATIONAL GMBH SALZGITTER CONSULT GMBH									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Nombre</th> <th>Fecha</th> </tr> <tr> <td>Diseñado: L Leon</td> <td>JUN-78</td> </tr> <tr> <td>Dibujado: E. Huamán</td> <td>AGO-78</td> </tr> <tr> <td>Aprobado: M. Lom</td> <td>DIC-78</td> </tr> </table>	Nombre	Fecha	Diseñado: L Leon	JUN-78	Dibujado: E. Huamán	AGO-78	Aprobado: M. Lom	DIC-78	EVALUACION DEL POTENCIAL HIDRO-ELECTRICO NACIONAL CUENCA DEL RIO - Basin of River: DIAGRAMA DE CADENAS - Chains Diagram <p style="text-align: center; font-weight: bold; font-size: 1.2em;">2111 - MARAÑON</p>
Nombre	Fecha								
Diseñado: L Leon	JUN-78								
Dibujado: E. Huamán	AGO-78								
Aprobado: M. Lom	DIC-78								
Reemplaza a:									
Reemplazado por:									
Reg. No. 2111-22	Escala: _____ Dibujo Nr.: _____								

24

25

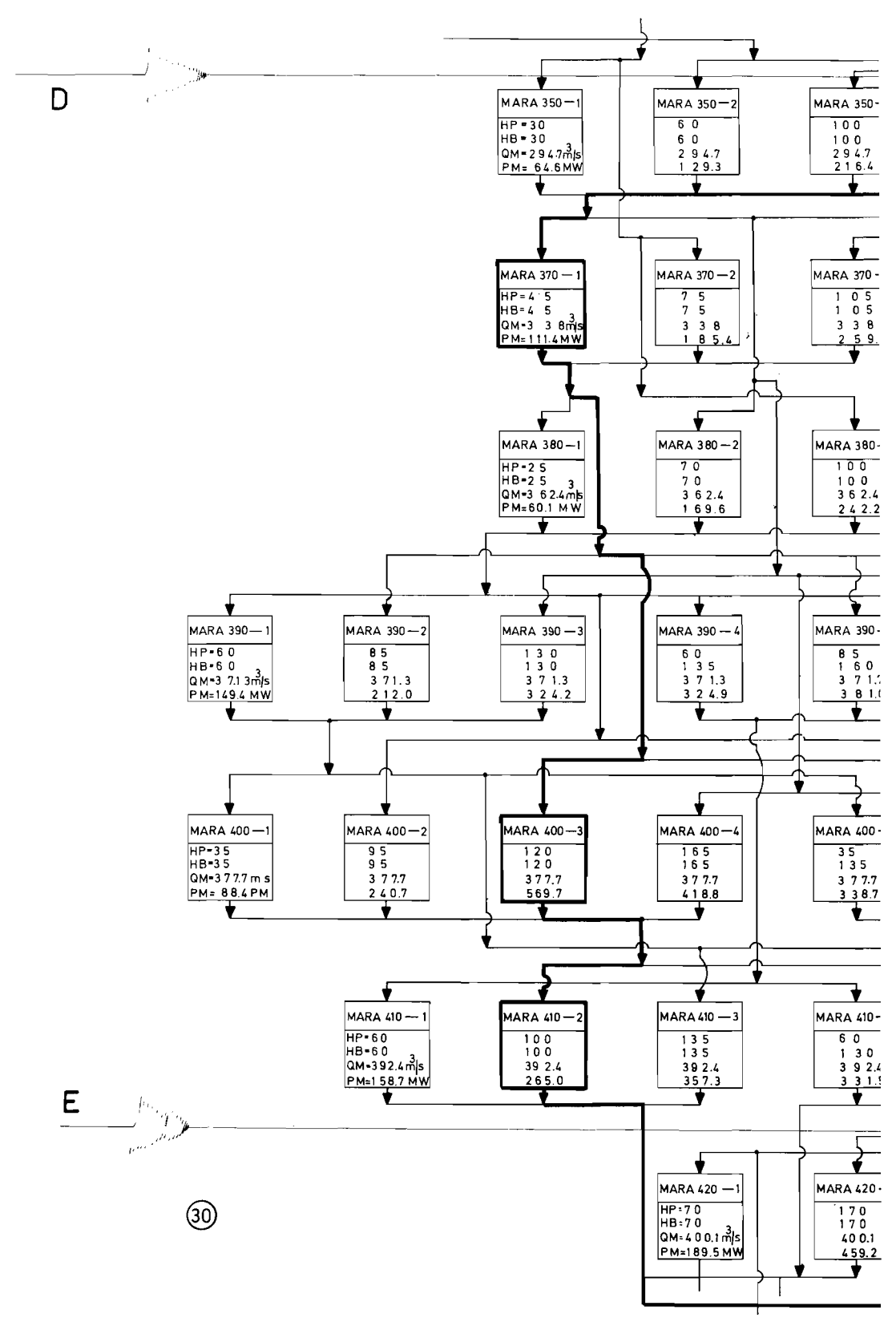
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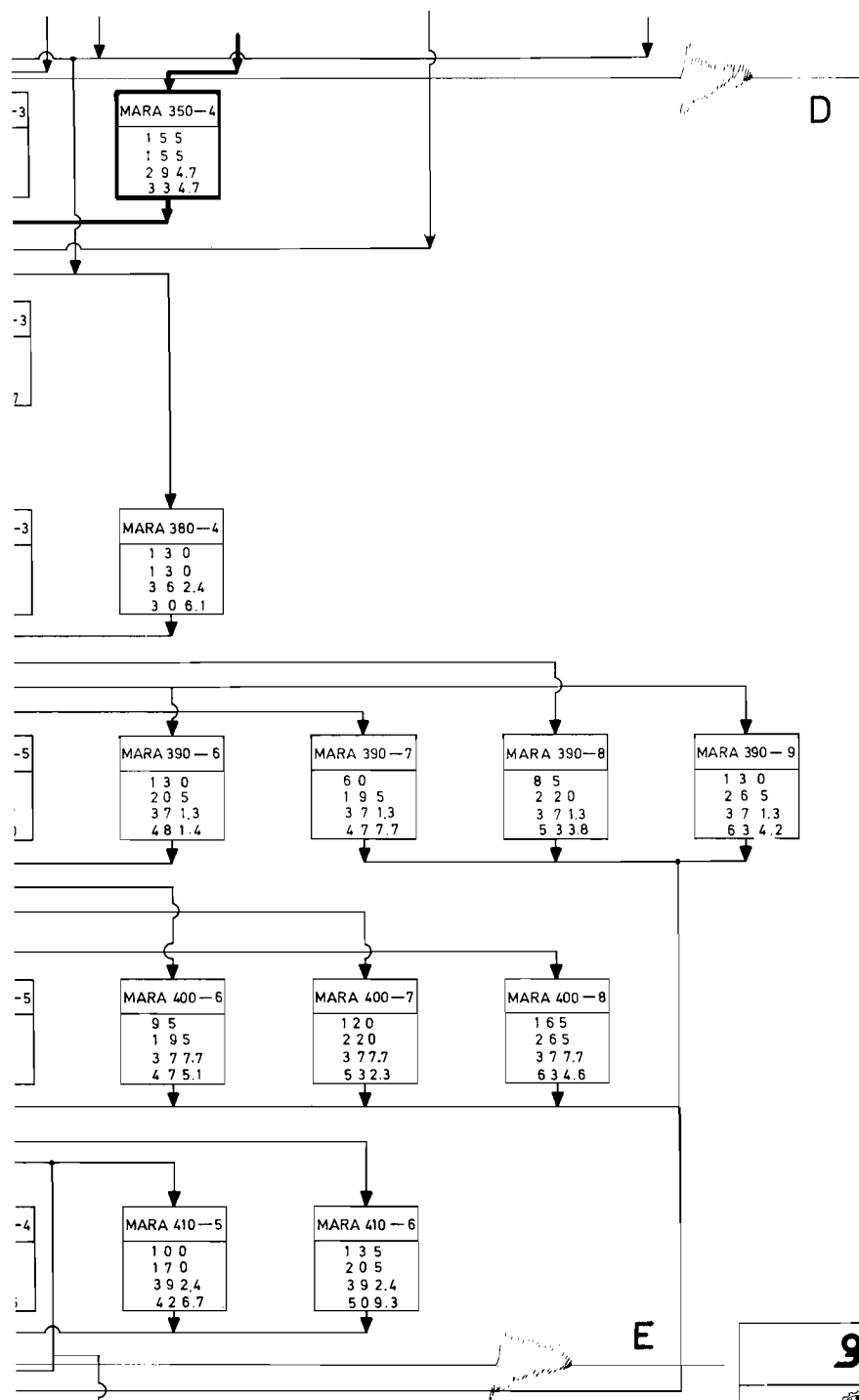
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30



ARAÑON



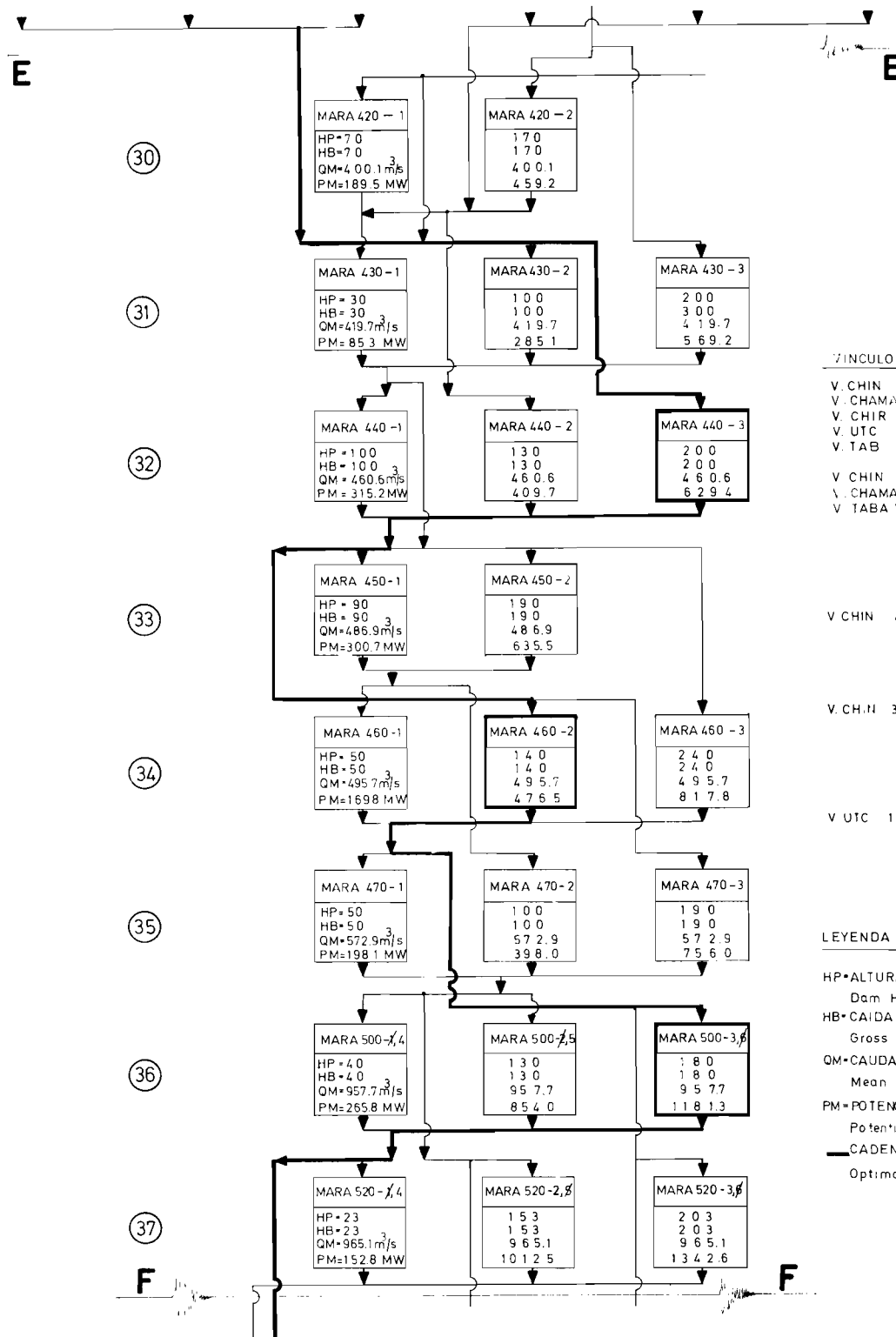
VINCULOS EXTERNOS
 V CRIS 1—MARA 390-1,4,7
 400-2,6

LEYENDA - KEY
 HP=ALTURA DE PRESA (m)
 Dam Height
 HB=CAIDA BRUTA (m)
 Gross Head
 QM=CAUDAL MEDIO $\frac{m^3}{s}$
 Mean Flow
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 Potential Based on Mean Flow
 — CADENA OPTIMA
 Optimal Chain

		SOCIEDAD ALEMANA DE COOPERACION TECNICA (GIZ) GMBH	
		REPUBLICA DEL PERU MINISTERIO DE ENERGIA Y MINAS DIRECCION GENERAL DE ELECTRICIDAD	
		KONSORTIUM LAHMEYER INTERNATIONAL GMBH SALZGITTER CONSULT GMBH	
Diseñado	L. Leon	Fecha	JUN-78
Dibujado	E. Huamán		AGO-78
Aprobado	M. Lom.		DIC-78
Reemplaza a:			
Reemplazado por			
Reg. No	2111-23		Escala
			Dibujo Nr.

EVALUACION DEL POTENCIAL HIDRO-ELECTRICO NACIONAL
 CUENCA DEL RIO—Basin of River:
 DIAGRAMA DE CADENAS—Chains Diagram
2111—MARAÑON

2111 MARAÑÓN



VINCULOS - EXTERNOS

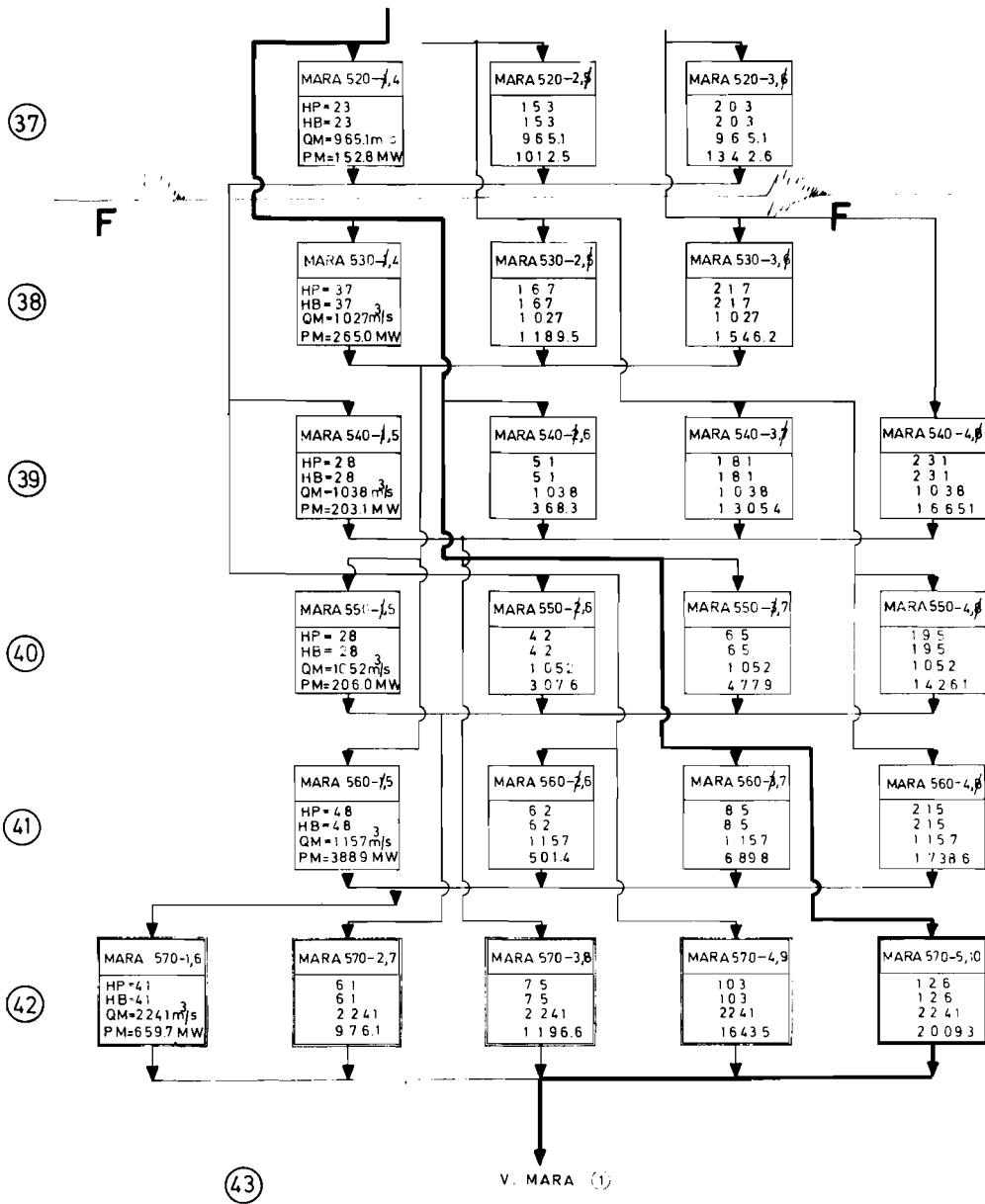
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V. CHAMA	4	→ MARA 500 - 3
V. CHIR	1	520 - 3
V. UTC	1	530 - 3
V. TAB	2	540 - 4
V. CHIN	2	
V. CHAMA	2	→ MARA 500 - 5
V. TABA	1	520 - 2
		530 - 2
		540 - 3
		550 - 4
		560 - 4
V. CHIN	4	→ MARA 520 - 4
		530 - 4
		540 - 6
		550 - 7
		560 - 7
		570 - 5,10
V. CH. N	3	→ MARA 500 - 4
		520 - 2
		530 - 2
		540 - 3
		550 - 4
		560 - 4
V. UTC	1	→ MARA 500 - 2,4

LEYENDA - KEY

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Gross Head
- QM = CAUDAL MEDIO m³/s
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- PM = POTENCIA MEDIA (MW)
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

EVALUACION DEL POTENCIAL HIDROELECTRICO NACIONAL	DIAGRAMA DE CADENAS Chains Diagram	Reg. Nº
	CUENCA DEL RIO: Basin of River :	2111 - MARAÑÓN
		2111-24

2111 MARAÑON

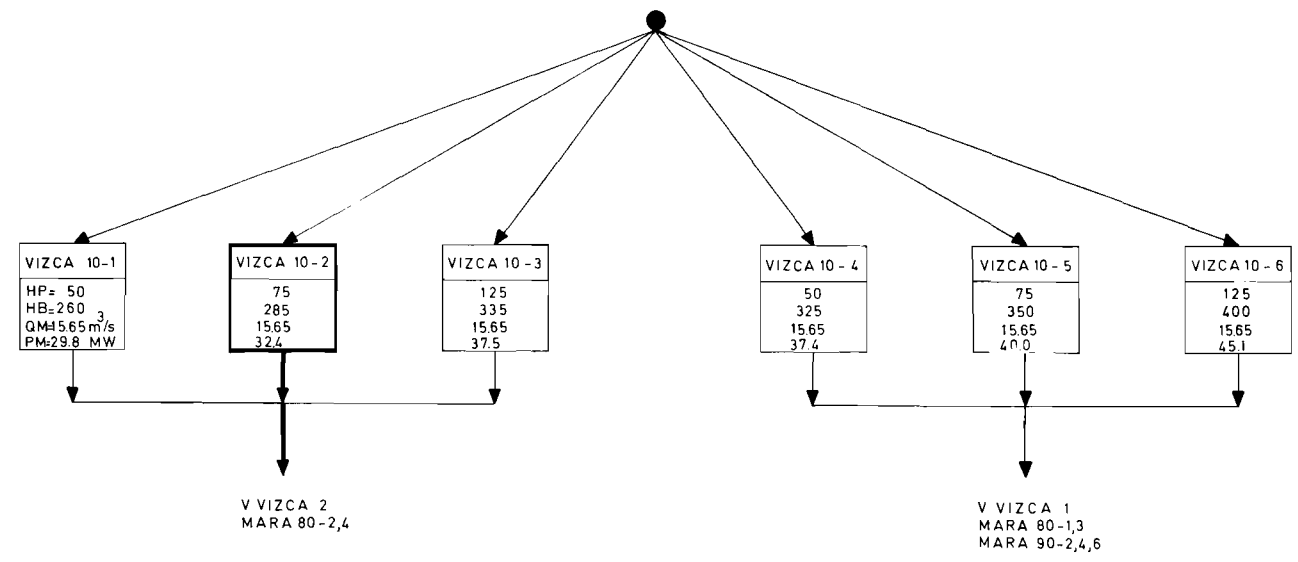


LEYENDA - KEY :

- HP= ALTURA DE PRESA(m)
Dam height
- HB=CAIDA BRUTA (m)
Gross Head
- QM=CAUDAL MEDIO m³/s
Mean Flow
- PM= POTENCIA MEDIA (MW)
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

EVALUACION DEL POTENCIAL HIDROELECTRICO NACIONAL	DIAGRAMA DE CADENAS Chains Diagram	Reg. Nº 2111-25
	CUENCA DEL RIO: Basin of River :	

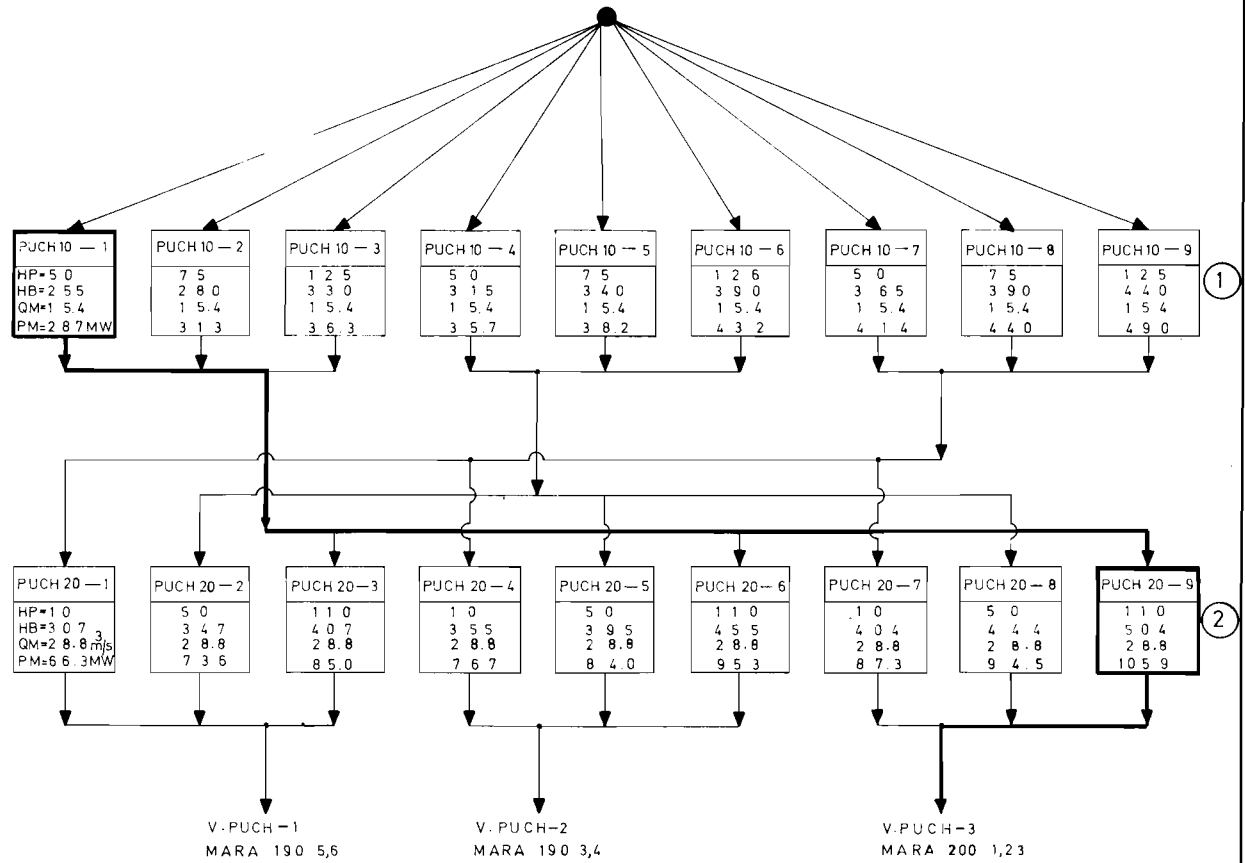
2111 VIZCARRA



LEYENDA - KEY

- HP= ALTURA DE PRESA(m)
Dam Height
- HB=CAIDA BRUTA (m)
Gross Head
- QM=CAUDAL MEDIO m³/s
Mean Flow
- PM=POTENCIA MEDIA(MW)
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

2230 PUCHCA

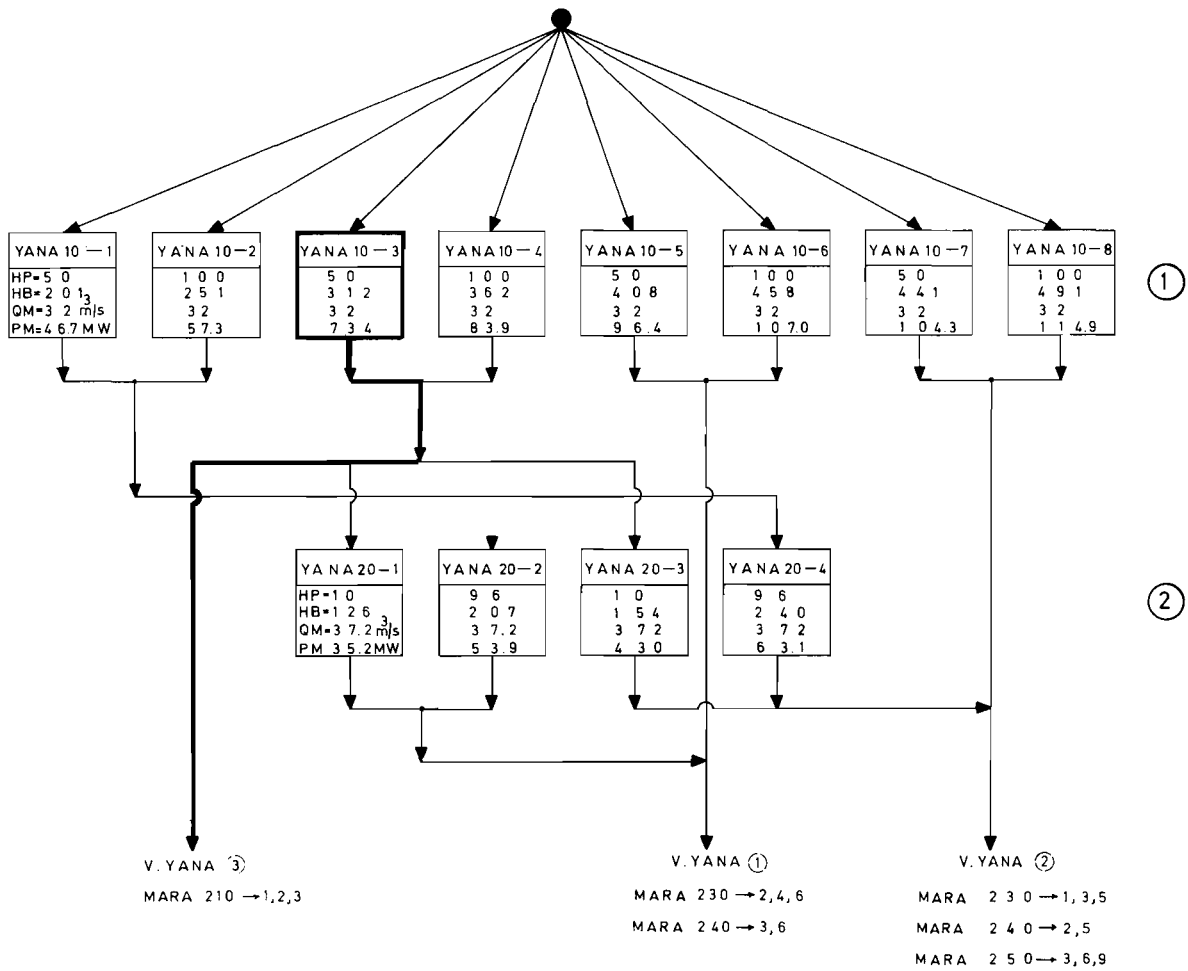


LEYENDA - KEY :

- HP•ALTURA DE PRESA (m)
Dam Height
- HB•CAIDA BRUTA (m)
Gross Head
- QM•CAUDAL MEDIO m³/s
Mean Flow
- PM•POTENCIA MEDIA (MW)
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

EVALUACION DEL POTENCIAL HIDROELECTRICO NACIONAL	DIAGRAMA DE CADENAS Chains Diagram		Reg. Nº 2111 - 27
	CUENCA DEL RIO: Basin of River : 2230 - PUCHCA		

2111 YANAMAYO



LEYENDA-KEY :

- HP=ALTURA DE PRESA (m)
Dam Height
- HB=CAIDA BRUTA (m)
Gross Head
- QM=CAUDAL MEDIO m³/s
Mean Flow
- PM=POTENCIA MEDIA (MW)
Potential Based on Mean Flow
- CADENA OPTIMA
Optimal Chain

EVALUACION DEL POTENCIAL HIDROELECTRICO NACIONAL	DIAGRAMA DE CADENAS Chains Diagram	Reg. N°
	CUENCA DEL RIO: Basin of River :	2111 - YANAMAYO

2111 - 28