

HYL/ENERGIRON PROJECTS REFERENCE LIST

N°	DRP name	Location	Process	Product	Design capacity, (MTPY)	Product quality, Metallization % (Carbon %)	Start-up
1	1M, HYLSA (Former)	Monterrey, Mexico	HYL I	HDRI	0,10	85% (2.5%)	1957
2	2M, HYLSA (Former)	Monterrey, Mexico	HYL I	CDRI	0,25	85% (2.5%)	1960
3	TAMSA, TAMSA (Former)	Veracruz, Mexico	HYL I	CDRI	0,28	85% (2.5%)	1967
4	2P, HYLSA (Former)	Puebla, Mexico	HYL I	CDRI	0,31	85% (2.5%)	1969
5	Pilot Plant, HYLSA (Former)	Monterrey, Mexico	HYL ZR	CDRI	0,01	92% (2.5%)	1974
6	Ternium Hylsa, 3M, HYLSA (Former)	Monterrey, Mexico	HYL I	CDRI	0,48	85% (2.5%)	1974
7	Usiba I, Usiba (Former)	Salvador de Bahia, Brazil	HYL I	CDRI	0,23	85% (2.5%)	1974
8	HYL I, Siderúrgica del Orinoco (SIDOR)	Matanzas, Venezuela	HYL I	CDRI	0,36	85% (2.5%)	1976
9	2P, HYLSA (Former)	Puebla, Mexico	HYL I	CDRI	0,63	85% (2.5%)	1977
10	Krakatau I, PT Krakatau Steel	Kota Baja, Indonesia	HYL I	CDRI	0,56	85% (2.5%)	1978
11	Krakatau II, PT Krakatau Steel	Kota Baja, Indonesia	HYL I	CDRI	0,56	85% (2.5%)	1978
12	SEIS-I, SCIS	Khor-Al-Zubair, Iraq	HYL I	CDRI	0,27	85% (2.5%)	1979
13	SEIS-II, SCIS	Khor-Al-Zubair, Iraq	HYL I	CDRI	0,27	85% (2.5%)	1979
14	2M5, HYLSA (Former)	Monterrey, Mexico	HYL III	CDRI	0,25	94% (2.7%)	1980
15	Sidor HYL A, Siderúrgica del Orinoco (SIDOR)	Matanzas, Venezuela	HYL II	CDRI	0,57	90% (2.5%)	1980
16	Sidor HYL B, Siderúrgica del Orinoco (SIDOR)	Matanzas, Venezuela	HYL II	CDRI	0,7	90% (2.5%)	1980
17	Sidor HYL C, Siderúrgica del Orinoco (SIDOR)	Matanzas, Venezuela	HYL II	CDRI	0,7	85% (2.5%)	1981
18	3M5, Ternium	Monterrey, Mexico	HYL III	CDRI	0,50	94% (3.0%)	1983
19	SEIS-III, SCIS	Khor-Al-Zubair, Iraq	HYL I	CDRI	0,47	85% (2.5%)	1988
20	SEIS-IV, SCIS	Khor-Al-Zubair, Iraq	HYL I	CDRI	0,47	85% (2.5%)	1988
21	IA, ArcelorMittal Lázaro Cárdenas	Lazaro Cardenas, Mexico	HYL III	CDRI	0,50	94.8% (2.1%)	1988
22	IB, ArcelorMittal Lázaro Cárdenas	Lazaro Cardenas, Mexico	HYL III	CDRI	0,50	94.8% (2.1%)	1988

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23	2A, ArcelorMittal Lázaro Cárdenas	Lazaro Cardenas, Mexico	HYL III	CDRI	0,50	94.8% (2.1%)	1990
24	2B, ArcelorMittal Lázaro Cárdenas	Lazaro Cardenas, Mexico	HYL III	CDRI	0,50	94.8% (2.1%)	1990
25	ASCO I, Khouzestan Steel Co	Ahwaz, Iran	HYL I	CDRI	0,35	85% (2.5%)	1993
26	Salav, JSW Steel (Formerly Welspun Maxsteel)	Salav, India	HYL III	HBI	0,75	93.6% (1.1%)	1993
27	PSSB I, Perwaja Steel	Kemaman, Malaysia	HYL III	CDRI	0,60	95.0% (2.0%)	1993
28	PSSB II, Perwaja Steel	Kemaman, Malaysia	HYL III	CDRI	0,60	95.0% (2.0%)	1993
29	PTKS 1, PT Krakatau Steel	Kota Baja, Indonesia	HYL III	CDRI	0,68	93.3% (2.3%)	1993
30	PTKS 2, PT Krakatau Steel	Kota Baja, Indonesia	HYL III	CDRI	0,68	93.3% (2.3%)	1993
31	ASCO II, Khouzestan Steel Co	Ahwaz, Iran	HYL I	CDRI	0,34	90% (2.5%)	1994
32	ASCO III, Khouzestan Steel Co	Ahwaz, Iran	HYL I	CDRI	0,34	90% (2.5%)	1994
33	Usiba II, Usiba (Former)	Salvador de Bahia, Brazil	HYL III	CDRI	0,31	91.3% (2.8%)	1994
34	2P5, Ternium	Puebla, Mexico	HYL III	CDRI	0,61	93.3% (3.4%)	1995
35	4M, Ternium	Monterrey, Mexico	HYL ZR	HDRI-CDRI	0,68	94.4% (3.6%)	1998
36	Module D, Hadeed	Al Jubail, SaudiArabia	HYL III	CDRI	1,10	94.4% (2.4%)	1999
37	LGOK I, Lebedinsky GOK	Gubkin, Russia	HYL III	HBI	0,9	95.1% (1.1%)	1999
38	Module A, Briqven (Formerly Matesi)	Puerto Ordaz, Venezuela	HYL III	HBI	0,75	93.0% (1.8%)	2000
39	Module B, Briqven (Formerly Matesi)	Puerto Ordaz, Venezuela	HYL III	HBI	0,75	93.0% (1.8%)	2000
40	3M5, Ternium	Monterrey, Mexico	HYL ZR	CDRI	0,50	94.0% (3.9%)	2001
41	Salav, JSW Steel (Formerly Welspun Maxsteel)	Salav, India	HYL ZR	CDRI	0,6	94.0% (3.0%)	2007
42	Micromodule, Emirates Steel Arkan	Abu Dhabi, UAE	HYL ZR	CDRI	0,2	93.0% (3.5%)	2007

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43	GHC I, Emirates Steel Arkan	Abu Dhabi, UAE	ENERGIRON III	HDRI-CDRI	1,6 (2.0)	94.0% (2.0%)	2009
44	GHC II, Emirates Steel Arkan	Abu Dhabi, UAE	ENERGIRON III	HDRI-CDRI	1,6 (2.0)	94.0% (2.0%)	2011
45	Suez Steel, Suez Steel	Cairo, Egypt	ENERGIRON ZR	HDRI-CDRI	2,0	94.0% (3.5%)	2013
46	NSLA, Nucor Steel	Lousiana, USA	ENERGIRON ZR	CDRI	2,5	96.0% (3.5%)	2013
47	EZZ, EZZ Rolling Mills	Cairo, Egypt	ENERGIRON III	CDRI	1,9	94.0% (2.0%)	2015
48	Thai-Chin Steel, Thai-Chin Steel	Mandalay, Myanmar	ENERGIRON ZR	CDRI	0,5	94.0% (3.5%)	In progress
49	Empresa Siderurgica Mutun (ESM), Empresa Siderurgica Mutun (ESM)	Puerto Suárez, Bolivia	ENERGIRON ZR	CDRI	0,2	93.0% (3.5%)	In progress
50	HYBRIT, HYBRIT Development	Luleå, Sweden	ZR Pilot Plant for 100% Hydrogen	CDRI-HBI	1000 kg/h	93.0% (0-4.0%)	2020
51	μDRAL, Salzgitter Flachstahl	Salzgitter, Germany	ZR Pilot Plant for 100% Hydrogen	CDRI-HBI	100 kg/h	93.0% (0-4.0%)	2022
52	OMK, OMK	Vyksa, Russia	ENERGIRON III	HDRI-CDRI	2,5	94.0% (2.0%)	On hold
53	HBZX, Hebei Iron & Steel Group (HBIS)	Hebei, China	ENERGIRON ZR (70% H2)	CDRI	0,55	94.0% (2.0%)	2023
54	Baosteel Zhanjiang, Baowu Group	Guangdong, China	ENERGIRON ZR	CDRI	1,0	94.0% (3%)	2024
55	SALCOS, Salzgitter Flachstahl	Salzgitter, Germany	ENERGIRON ZR	HDRI-CDRI	2,10	-	In progress
56	HERACLESS, TATA Steel Netherlands	Ijmuiden, Netherlands	ENERGIRON ZR	HDRI-CDRI	2,50	-	In progress
57	5M, Ternium	Pesquería, Mexico	ENERGIRON ZR	HDRI-CDRI	2,10	-	In progress
58	Vulcan Green Steel, Jindal Shadeed Iron and Steel	Duqm, Oman	ENERGIRON ZR	HDRI-HBI	2,50	-	In progress

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59	MD1 Plant, LKAB	Gällivare, Sweden	ENERGIRON ZR	CDRI-HBI	-	-	In progress
60	EDRP, Nippon Steel	Kamisu, Japan	ENERGIRON ZR	HDRI-CDRI-HBI	1000 kg/h	-	In progress
61	HYDRA, Rina SpA	Rome, Italy	ENERGIRON ZR	HDRI-CDRI-HBI	100 kg/h	-	In progress