



## Waste Fuels Burners & Installations – Reference List

Number	Client	Title	Date	Plant	Activity	Fuel
83	Votorantim Cimentos S/A	Study of Rice Husks Co-processing Capacity of the Proposed New Main Burner	2019	Cuiabá-MT, Brazil	Cement	Rice Husks
82	Supremo Secil Cimentos	Optimization and Improvement in the Co-processing System	2018	Adrianópolis-PR, Brazil	Cement	Solid Waste Fuel
81	Votorantim Cimentos S/A	Liquid Waste Fuel Injection Lances for Kiln W9 Main Burner	2018	Rio Branco do Sul-PR Brazil	Cement	Liquid Waste Fuel
80	Votorantim Cimentos S/A	Main Burner for Solid and Liquid Waste Fuel Firing for Kiln W7	2018	Rio Branco do Sul-PR Brazil	Cement	Solid and Liquid Waste Fuel
79	CEMEX USA	Main Burner for Peanut / Pecan Shells and Natural Gas Firing	2018	Clinchfield-GA, USA	Cement	Peanut and Pecan Shells
78	Itambé S.A.	Study of Co-processing Capacity of Crushed and Pasty Waste Fuels for kilns 2 and 3	2018	Balsa Nova-PR, Brazil	Cement	Crushed and Pasty Waste Fuels
77	InterCement Brazil S/A	Basic Project for Oil Sludge	2017	Campo Formoso-BA, Brazil	Cement	Oil Sludge
76	Votorantim Cimentos S/A	Main Burner for Solid and Liquid Waste Fuel Firing for Kiln W8	2016	Rio Branco do Sul-PR Brazil	Cement	Solid and Liquid Waste Fuel
75	Votorantim Cimentos S/A	Liquid Waste Fuel Injection Lances	2016	Cantagalo-RJ, Brazil	Cement	Liquid Waste Fuel
74	Itambé S.A.	Detailed Project for Reception, storage, dosing and combustion system of solid waste fuels for calciner	2015	Campo Largo-PR, Brazil	Cement	RDF- 3" and Shredded Tires- 2"



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73	InterCement Brazil S/A	Detailed Project for Pneumatic transport of solid waste fuels to main burner	2014	Candiota-RS, Brazil	Cement	Shredded plastic and rubber from shoes industry
72	Apodi Cimentos SA	Main burner for solid and liquid alternative fuels firing	2014	Quixeré-CE, Brazil	Cement	RDF, solvents, shell nuts
71	Buzzi Unicem USA	CFD Study of solid fuels injection in calciner to determine optimum injection point and maximum size analysis.	2014	Chattanooga-TN, USA	Cement	Shredded Tires- 2"
70	Samarco Mineração S.A.	Conceptual Project for Biomass Gasification in Iron Ore Pelletizing kilns	2014	Anchieta-ES, Brazil	Mining	Biomass - wood
69	InterCement Brazil S/A	CFD Study of solid fuels injection in calciner to determine optimum injection point and maximum size analysis.	2014	Ijaci-MG, Brazil	Cement	Shredded Tires- 2"
68	Cementa Heidelberg	Burner tip kiln #4 for Solid and Liquid Waste Fuels, 40% of substitution	2014	Degerhamn, Sweden	Cement	Solvents, Chicken Feathers, MBM & Agricultural Wastes
67	Fibria	Combustion System for Methanol in a Lime Rotary Kiln	2013	Aracruz-ES, Brazil	Paper	Methanol
66	Cementa Heidelberg	Burner tip kiln #3 for Solid and Liquid Waste Fuels, 40% of substitution	2013	Degerhamn, Sweden	Cement	Solvents, Chicken Feathers, MBM & Agricultural Wastes
65	InterCement S/A	Main Burner for Solid and Liquid Waste Fuels, 20% substitution	2013	Candiota-RS, Brazil	Cement	Rice Husk, solvents & Shoe Residues (leather and plastic)
64	Votorantim Cimentos S/A	Detailed Project for solid waste fuel firing at calciner - Kiln 3 – substitution of 60%	2013	Sobradinho– DF, Brazil	Cement	RDF- 2" and Shredded Tires- 2"

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63	Votorantim Cimentos S/A	Detailed Project for solid waste fuel firing at calciner - Kiln 1	2013	Cuiabá – MT, Brazil	Cement	RDF- 2” and Shredded Tires- 2”
62	Itambé S.A.	Study, Conceptual and Basic Project for Reception, storage, dosing and combustion system of solid waste fuels for calciner	2013	Campo Largo- PR, Brazil	Cement	RDF- 3” and Shredded Tires- 2”
61	Votorantim Cimentos S/A	Detailed Project for solid waste fuel firing at calciner - Kiln 9	2013	Rio Branco – PR, Brazil	Cement	RDF- 2” and Shredded Tires- 2”
60	Votorantim Cimentos S/A	Detailed Project for solid waste fuel firing at calciner - Kiln 2	2013	Laranjeiras – SE, Brazil	Cement	RDF- 2” and Shredded Tires- 2”
59	InterCement S/A	Reception, storage, dosing and combustion system for main burner and calciner	2012	Campo Formoso-BA, Brazil	Cement	Liquid residues
58	Cimpor Brasil, presently InterCement S/A	Storage, dosing and combustion system of liquid residues for main burner and calciner	2012	São Miguel dos Campos - AL, Brazil	Cement	Liquid residues
57	Brennand Cimentos	Detailed Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burner and calciner	2012	Sete Lagoas – MG, Brazil	Cement	RDF- ½” and 2”
56	Votorantim Cimentos S/A	Conceptual, Basic and Detailed Project for alternative solid fuels reception, storage, conveying, dosing and firing systems for calciner	2011	Xambioá – TO, Brazil	Cement	Shredded solids
55	Votorantim Cimentos S/A	Project for modification of alternative fuel system at main burner - Kiln 2	2012	Cantagalo - RJ, Brazil	Cement	RDF- ½”
54	Votorantim Cimentos S/A	Project for solid and liquid alternative fuels firing at main burner - Kiln 2	2011	Votorantim - SP, Brazil	Cement	RDF

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Number	Client	Title	Date	Plant	Activity	Fuel
53	Votorantim Cimentos S/A.	Detailed Project for alternative fuels firing system for calciner - Kiln 4	2011	Salto de Pirapora – SP, Brazil	Cement	RDF – 2”
52	Votorantim Cimentos S/A	Technical Study for use of wood chips as fuel for main burner at pozzolan kiln	2011	Porto Velho - RO, Brazil	Cement	Wood chips – ½”
51	Votorantim Metais S/A	Basic Project for biomass firing at combustion chambers for nickel carbonate drying - storage, dosing and combustion	2011	Niquelândia-GO, Brazil	Mining	Biomass
50	Votorantim Cimentos S/A	Detailed Project for solid waste fuel firing at calciner	2011	Vidal Ramos – SC, Brazil	Cement	RDF- 2” and Shredded Tires
49	Votorantim Cimentos S/A	Detailed Project for solid waste fuel firing at calciner - Kiln 3	2011	Laranjeiras – SE, Brazil	Cement	RDF and Shredded Tires
48	Votorantim Cimentos S/A	Project for combustion system for pozzolan kiln	2011	Sobradinho - DF, Brazil	Cement	Biomass
47	Cimpor Brasil	Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burner and calciner	2011	Caxitu – PB, Brazil	Cement	RDF- ½” & 2”; Shredded Tires and MSW
46	Arcelor Mittal	Combustion system for tar and wood residues	2011	Martinho Campos - MG, Brazil	Steel	Asphalt and wood
45	Votorantim Cimentos S/A	Basic Project for solid and liquid waste fuels reception, storage, conveying, dosing and combustion systems - Kiln 2	2010	Votorantim – SP, Brazil	Cement	RDF- ½”, solvents
44	Votorantim Cimentos S/A	Project for reception, storage tanks, pumping units, control valve trains and injection lances for main burner - Kiln 2	2010	Pinheiro Machado– RS, Brazil	Cement	Liquid solvents

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Number	Client	Title	Date	Plant	Activity	Fuel
43	Empresa de Cimentos Liz S.A.	Project for alternative fuels reception, storage, conveying, dosing and firing systems for calciner	2010	Vespasiano - MG, Brazil	Cement	Biomass, RDF – 2”.
42	Usinaverde S.A.	Modification of combustion chamber for solid waste fuel firing and steam generator	2010	Rio de Janeiro-RJ, Brazil	Cement	Solid waste
41	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Study for increasing of waste fuel substitution - Kiln 1	2010	Apiaí - SP, Brazil	Cement	Solid and liquid waste
40	Votorantim Cimentos S/A	Project for reception, storage tanks, pumping units, control valve trains and injection lances for main burner and calciner - Kilns 1, 2 and 3	2010	Itaú de Minas - MG, Brazil	Cement	Vegetal glycerol
39	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Project for liquid waste injection at rising duct	2010	Pedro Leopoldo - MG, Brazil	Cement	Liquid waste
38	Cia Cimentos Ribeirão Grande	Design of main burner for solid and liquid alternative fuels firing - Kilns 1 and 2	2010	Ribeirão Grande - SP, Brazil	Cement	RDF, solvents
37	Votorantim Cimentos S/A	Project for reception, storage tanks, pumping units, control valve trains and injection lances for main burner and calciner	2010	Nobres - MT, Brazil	Cement	Vegetal glycerol
36	Votorantim Cimentos S/A	Project for main burner combustion system	2010	Corumbá-MS, Brazil	Cement	Coarse petcoke
35	Micro Ambiental	Process engineering and project for equipments of RDF generation plant	2010	Jundiaí-SP, Brazil	RDF plant	RDF

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Number	Client	Title	Date	Plant	Activity	Fuel
34	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Technical Assistance for modification of feeding system of alternative fuels at calciner	2010	Ijaci - MG, Brazil	Cement	RDF
33	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Detailed Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burner and calciner	2009	Pedro Leopoldo - MG, Brazil	Cement	RDF
32	Votorantim Cimentos S/A	Project for reception, storage tanks, pumping units, control valve trains and injection lances - Kiln 4	2009	Salto de Pirapora - SP, Brazil	Cement	Vegetal glycerol
31	Votorantim Cimentos S/A	Project for reception, storage tanks, pumping units, control valve trains and injection lances	2009	Sobradinho - DF, Brazil	Cement	Vegetal glycerol
30	Votorantim Cimentos S/A	Injection lance design for main burner	2009	Salto de Pirapora - SP, Brazil	Cement	Vegetal glycerol
29	Usinaverde S.A.	Design of combustion chamber for solid waste fuel firing	2009	Rio de Janeiro-RJ, Brazil	Power generation	RDF
28	Votorantim Cimentos S/A	Injection lance design for main burner	2009	Nobres - MT, Brazil	Cement	Vegetal glycerol
27	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Study for increasing of waste fuel substitution	2008	Apiai-SP, Bodoquena-MS, Ijaci-MG and Pedro Leopoldo-MG, Brazil	Cement	RDF, solvents, tire chips, wood chips,
26	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Security check for milling unit of residues	2008	Olavarría Argentina	Cement	asphalt residue

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Number	Client	Title	Date	Plant	Activity	Fuel
25	Votorantim Cimentos S/A	Project of combustion system - Kiln 1	2008	Cantagalo - RJ, Brazil	Cement	Petcoke, charcoal, HFO, RDF, liquid wastes
24	Usinaverde S.A.	Design of combustion chamber for solid waste fuel firing	2007	Rio de Janeiro-RJ, Brazil	Power generation	RDF
23	MRN	Complete engineering system for wood for bauxite drying starting from plantation.	2007	Oriximiná - PA, Brazil	Mining	wood
22	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Project for reception, storage tanks, pumping units, control valve trains and injection lances for main burner and calciner	2007	Ijaci – MG, Brazil	Cement	RDF, liquid wastes, slurry
21	Votorantim Cimentos S/A	Combustion system for off gas from blast furnace	2007	Barcarena - PA, Brazil	Cement	Off gas from blast furnace
20	Votorantim Cimentos S/A	Design of main burner for solid and liquid waste fuel firing – Kiln 1	2007	Votorantim - SP, Brazil	Cement	RDF, liquid wastes
19	Cimpor Brasil	Basic Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burners and calciners	2006	Campo Formoso-BA, São Miguel dos Campos-AL, Cezarina-GO and João Pessoa-PB, Brazil	Cement	tire chips, RDF
18	Cimpor Brasil	Basic Project for main combustion system using alternative fuels	2006	Candiota - RS, Brazil	Cement	rice husk

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Number	Client	Title	Date	Plant	Activity	Fuel
17	Shell Brasil	Increase of bagasse consumption on HGG	2006	São Paulo-SP, Brazil	Agro-industry	Orange bagasse dust
16	Votorantim Cimentos S/A	Detailed Project for main burner for alternative fuels - Kiln 2	2006	Cantagalo – RJ, Brazil	Cement	RDF, liquid wastes
15	Votorantim Cimentos S/A	Basic Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burner and calciner - Kiln 3	2006	Itaú de Minas - MG, Brazil	Cement	RDF
14	Votorantim Cimentos S/A	Design of main burner for waste fuels firing - Kiln 8	2006	Rio Branco do Sul-PR, Brazil	Cement	RDF
13	Votorantim Cimentos S/A	Detailed Project for alternative fuels reception and conveying - Kiln 8	2005	Rio Branco do Sul – PR, Brazil	Cement	tire chips, RDF, cable pieces
12	Votorantim Cimentos S/A	Detailed Project for alternative fuels reception and conveying - Kiln 5	2005	Rio Branco do Sul – PR, Brazil	Cement	tire chips, RDF, cable pieces
11	Votorantim Cimentos S/A	Detailed Project for combustion system using waste fuels – Kiln 8	2005	Rio Branco do Sul – PR, Brazil	Cement	tire chips, RDF, cable pieces
10	Votorantim Cimentos S/A	Detailed Project for combustion system using waste fuels – Kiln 5	2005	Rio Branco do Sul – PR, Brazil	Cement	tire chips, RDF, cable pieces
09	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Study for increasing of waste fuel substitution	2005	Bodoquena – MS, Brazil	Cement	tire chips, RDF
08	Camargo Corrêa Cimentos S.A., presently InterCement	Study for increasing of waste fuel substitution	2005	Bodoquena – MS, Brazil	Cement	tire chips, RDF



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07	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Basic Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burner and calciner	2005	Bodoquena – MS, Brazil	Cement	tire chips, RDF
06	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Study for increasing of waste fuel substitution - Kiln 2	2005	Apiá - SP, Brazil	Cement	tire chips, RDF
05	Camargo Corrêa Cimentos S.A., presently InterCement S/A	Project for solid waste fuel injection - Kiln 3	2004	Pedro Leopoldo-MG, Brazil	Cement	RDF
04	Votorantim Cimentos S/A	Basic Project for alternative fuels reception, storage, conveying, dosing and firing systems for main burner and calciner - kiln 6 & 7	2004	Rio Branco do Sul – PR, Brazil	Cement	RDF
03	Citrovita Agro Industrial Ltda.	Project of combustion system for hot gases generator used for drying of orange bagasse	2004	Catanduva-SP, Brazil	Agro-industry	Orange bagasse dust
02	Ver-Bor Latinoamericana	Consulting for project of waste fuel combustion system	2004	São Paulo-SP, Brazil	Consulting	RDF
01	Fibria	Project of combustion system for petcoke and alternative fuels (non-condensable gas and methanol)	2004	São Paulo-SP, Brazil	Paper	Non-condensable gas and methanol