

Reference list



Consultoria e Engenharia Ltda.

Rua Saldanha Marinho, 740

Bairro Alemães

13.416-320 - Piracicaba/SP - Brasil

Telefone/Fax: +55 19 34021100

Telefone/Fax: +55 19 34334869

Web site: www.iprosucar.com.br

E-mail: contato@iprosucar.com.br

Year 2005

Grupo Guarani - Unit Cruz Alta - Brazil	Reduction process steam consumption	Viability study
Grupo Guarani - Unit Cruz Alta - Brazil	Optimization of the sugar factory	Viability study
Zilor - Brazil	Concentration and incineration of vinasse	Viability study
Zilor - Brazil	Color balance sugar	Consulting
Zilor - Brazil	Improved automation of Units Barra Grande, São José and Quatá	Basic project
Ingenio Adolfo Lopez Mateos - México	Improvement of sugar dryers	Detailed project
Grupo BSM - Mexico	Sugar handling system and bagging (ingenio Constancia, San Francisco Ameca, San Rafael, Queseria and San Miguel)	Basic and detailed project
Grupo GAM - Mexico	Sugar handling system and bagging (ingenio Tala)	Basic and detailed project
Ingenio Tres Valles - Mexico	Sugar handling system and bagging	Basic and detailed project
Ingenio Tres Valles - Mexico	Implementation of the transport system and dosing alloy sugar	Basic and detailed project
Ingenio Tres Valles - Mexico	Transport system and reject dilution sugar driers	Detailed project
Usina Cresciumal - Brazil	Fast clarifier installation - 200 m3/h	Detailed project

Year 2005

Usina Moema - Brazil	Implementation of crystallization system type "Seed Magma"	Basic project
Zilor - Brazil	Evaluation barometric condensers - Unity Quatá	Consulting
Usina Santa Cruz OP - Brazil	Evaluation barometric condensers and separators drag the seed pan boiler	Consulting
Usina Santa Elisa - Brazil	Optimization of sugar dryers	Basic and detailed project
Usina Santa Lúcia - Brazil	Rotary screen for sugar	Basic project
Usina São Martinho - Brazil	Fast clarifier, SRI type, capacity 290 m3/h	Detailed and executive project
Usinas Itamarati - Brazil	Modifying barometric condensers for pan boiler	Detailed and executive project
Fermentec - Brazil	Course - Sugar industry	Qualification
Pioneiros Bioenergia - Brazil	Operating departure of sugar dryer and evaluation	Consulting
Usinas Itamarati - Brazil	Sugar manufacturing process	Consulting

Year 2006

Grupo Guarani - Unit Cruz Alta - Brazil	The centrifugal cleaning system with high purity molasses	Basic and detailed project
Zilor - Brazil	Study actions to reduce the process steam consumption - Unity São José	Consulting
Zilor - Brazil	Improvements in the automation of Units Barra Grande, São José and Quatá	Consulting
Ingenio Adolfo Lopez Mateos - Mexico	Reengineering equipment drying and bagging sector	Basic and detailed project
Ingenio San Miguel del Naranjo - Mexico	Dryer / Cooler of sucra vertical	Detailed and executive project
Ingenio San Miguel del Naranjo - Mexico	Moving crystal and refined sugar	Detailed project
Nordzucker - Germany	Assessment of Sugar plant in Brazil	Consulting and viability study
Nordzucker - Germany	New unit deployment in Brazil (greenfield)	Viability study
Pioneiros Bioenergia - Brazil	Optimization of sugar dryer and installation chiller	Detailed project
Unimar - Brazil	New unit deployment of ethanol and energy, with an initial capacity of 700.000 t cane/year (greenfield)	Viability study
Usina Moema - Brazil	Study expansion - processing 1100 t/h of cane	Viability study
Usina Pantanal - Brazil	Optimization and increased sugar dryer capacity	Detailed project

Year 2006

Usina Santa Elisa - Brazil	Remodeling and transfer of drying industry peripherals	Detailed project
Usina São Francisco - Brazil	Process steam consumption suitability for deployment of neutral alcohol unit 50 m ³ /day	Detailed project
Usina São Francisco - Brazil	Evaluation and study of the water cooling system	Consulting
Usina São Martinho - Brazil	Optimization of the sugar factory capacity to 75.000 bag/day	Basic project
Usina Vale do Rosário - Brazil	Optimization sugar dryers	Consulting
Usina Vale do Rosário - Brazil	Balance of mass and energy - New Unit (Usina Frutal - greenfield)	Consulting
Nordzucker - Germany	New unity (greenfield)	Viability study
Usina Santa Elisa - Brazil	Technical support in the sugar dryers	Consulting
Ingenio Adolfo Lopez Mateos - Mexico	Modernization dryer area	Detailed project
Nordzucker - Germany	Evaluation Usina Cofercatú	Consulting
Pioneiros Bioenergia - Brazil	Optimization sugar dryers	Detailed project
Pioneiros Bioenergia - Brazil	Fast clarifier, SRI type, capacity 350 m ³ /h	Detailed and executive project

Year 2006

Usina São Luiz (Dedini) - Brazil	Capture system of sugar dust collection	Detailed project
Usina Sto Antonio da Posse - Brazil	Optimization sugar dryers	Detailed project
Grupo Guarani - Unidade Cruz Alta - Brazil	Optimization sugar dryers and installation of chiller	Detailed project
Usina Jacarézinho - Brazil	Sizing of bucket elevators	Basic project
Pioneiros Bioenergia - Brazil	Remodelling of juice treatment and equipment sector	Detailed project

Year 2007

Pioneiros Bioenergia - Brazil	Structure and new centrifuge facility	Detailed project
Zilor - Brazil	Reduction of steam consumption and expandability - Unit Quatá	Viability study
Zilor - Brazil	Evaluation of drag of the sugar boiling pans - Unit São José	Consulting
Grupo Guarani - Unit Cruz Alta - Brazil	Optimization sugar factory	Detailed project
Ingenio Adolfo Lopez mateos - Mexico	Modification of the area of dryers and cold water	Detailed project
Cargill - Brazil	Modification of Garujá terminal system	Consulting
Ingenio Tres Valles - Mexico	Installation of sugar cooler	Detailed project
Zilor - Brasil	Installation of water superheated to centrifuges - Unit Quatá	Detailed project
Usina Alta Mogiana - Brazil	Optimization sugar dryers and installation of chiller	Basic and detailed project
Usina Cerradinho - Brazil	Optimization sugar dryers and installation of chiller	Detailed project
Pioneiros Bioenergia - Brazil	Technical advice in the sugar dryer	Consulting
Usina Alvorada - Brazil	Balance of mass and energy to crushing 350 TCH	Viability study

Year 2007

Dedini - Brazil	Evaporator type Roberts - 3.500 m ²	Executive project
Biomin - Brazil	Implementation factory BIOMIN (greenfield)	Basic and detailed project
Zilor - Brazil	Evaluation of condensers and multijet - Unit São José	Consulting
Cargill - Brazil	Expansion of CEVASA of the plant (sugar and energy)	Basic and detailed project
Usina São Martinho - Brazil	Fast clarifier - SRI type - 290 m ³ /h	Detailed and executive project
Nordzucker - Germany	Cogeneration to supply energy for ethanol plant	Basic and detailed project
Zilor - Brazil	Cooling system multijatos and barometric condensers - Unit São José	Detailed project
Zilor - Brazil	Washing system of centrifuges with rich molasses	Basic and detailed project

Year 2008

Usina Moema - Brazil	Adequacy of production of the white sugar	Detailed project
Usina Santa Helena - Brazil	Sector sugar bagging - ANVISA	Detailed project
Cargill - Brazil	Implantation of the plant Bom Jardim (energy, ethanol and sugar) - Greenfield	Basic project
Usina Vertente - Brazil	Adequacy of production of the white sugar	Detailed project
Zilor - Unidade Quatá - Brazil	Operational course - crystallization of sugar	Qualification
Biomin - Brazil	Work monitoring	Consulting
Zilor - Brazil	Monitoring start up (São José, Barra Grande and Quatá)	Consulting
Mausa - Brazil	Falling Film evaporators	Executive project
Zilor - Brazil	Adequacy of steam and modernization consumption - unit Quatá	Basic project
Zilor - Brasil	Adequacy of steam and modernization consumption - unit S. José	Basic project
Zilor - Brasil	The centrifugal cleaning system with molasses - Unit Quatá	Basic and detailed project
Cargill - Unit Uberlândia - Brazil	Expansion of the corn processing plant - duplication	Basic and detailed project

Year 2008

Bunge - Unit Pedro Afonso - Brazil	Implementation of Unit Pedro Afonso - Greenfield	Basic and detailed project
Cargill - Brazil	Expansion of CEVASA of the plant (sugar and energy) - design review	Detailed project

Year 2009

Usina Alvorada - Brazil	Evaluation of sugar dryer	Consulting
Cone Sul - Brazil	Site plan works and raw water collection system	Basic project
Cosan - Brazil	Energy audit - Units Barra Bonita, Gasa and Jatai	Viability study
Santa Elisa Vale Bioenergia - Brazil	Improvements in sugar driers	Basic project
Usina Santa Helena - Brazil	Improvements in sugar bagging sector	Basic and detailed project
Usina Noroeste Paulista - Brazil	Evaluation of sugar dryers	Consulting
Arengo 316 - South Africa	Greenfield sthanol plant from beet and grain sorghum	Adevanced basic project
Usina São Martinho - Brazil	Expansion of sugar production capacity	Basic project
Usina Açucareira Furlan - Brazil	Expansion Unit Avaré	Conceptual and basic project
Zilor - Brazil	Start up and process monitoring (São José, Barra Grande and Quatá)	Consulting
Khartoum State - Sudan	Sugar factory with high energy efficiency	Viability study
Agauta Sugar - India	Rating for expansion and energy potential of the Agata factory	Viability study

Year 2010

Nobre - Unidade Noroeste Paulista - Brazil	Expansion of sugar drying sector	Detailed project
Ingenio Tres Valles - Mexico	New bagging sugar	Detailed project
Ingenio Constancia - Mexico	Technical evaluation of dryers and sugar cooling	Consulting
Almoiz Industries - Pakistan	Sealing system and drainage of suits milling	Executive project
Cevasa - Central Energ. Vale do Sapucaí - Brazil	Distributor mixer for mass A and B	Executive project
NG/PDVSA - Venezuela	Complete fermentation - Unit Apure	Basic, detailed and executive project
NG/PDVSA - Venezuela	Complete fermentation - Unit Monágas	Basic, detailed and executive project
Cargill - Brazil	Biodiesel plant - Três Lagoas - MS	Basic and detailed project and monitoring
Usina Alta Mogiana - Brazil	Evaluation of sugar dryers	Consulting
Usina Santa Lúcia - Brazil	Bagging big bags in the new warehouse	Basic project
Usina São Martinho - Brazil	Crushing increased to 50.000 TCD	Basic project
Bunge - Unit Pedro Afonso - Brazil	Monitoring of assembly	Consulting

Year 2010

Usina Andrade - Brazil	Evaluation of sugar dryers	Consulting
Grupo Usacucar - Brazil	Increased sugar dryer capacity	Basic and detailed project and monitoring
Cosan - Brazil	Balance of mass and energy - optimization of process	Viability study
Grupo Usacucar - Terra Rica - Brazil	Expansion of sugar drying sector	Basic and detailed project
Grupo Usacucar - Cid. Gaucha - Brazil	Installing the sugar dryer	Detailed project
Cosan - Unit Costa Pinto - Brazil	Study and evaluation of sugar driers	Consulting
Zilor - Unit São José - Brazil	Optimization of the plant	Viability study and basic project
Zilor - Unit Barra Grande - Brazil	Optimization of the plant	Viability study and basic project
Zilor - Unit Quatá - Brazil	Optimization of the plant	Viability study and basic project
Zilor - Brazil	Start up and process monitoring (São José, Barra Grande and Quatá)	Consulting
JDW Sugar Mills - Pakistan	Evaluation of the plant and reduction of process steam consumption	Viability study and basic project

Year 2011

Yoki Alimentos - Brazil	System of dissolution of liquid sugar and inverted	Detailed project and monitoring
Amyris do Brasil - Brazil	Evaporation (5 effects) - 5 t/h	Basic project and EPCM
Bioenergia Brasil - Brazil	Barometric Condenser high efficiency	Executive project
Grupo Guarani - Unit Cruz Alta - Brazil	Reduction of the amorphous sugar temperature	Basic project
Pedra Agroindustrial - Brazil	Evaluation of sugar dryers	Consulting
Azucareira La Felsina - Paraguay	Technical evaluation of the sugar manufacturing process	Consulting
AJC Engineering - Pakistan	Falling Film evaporator - 4500 m ²	Executive project
Bunge - Unit Pedro Afonso - Brazil	Monitoring of process	Consuting
Cevasa - Central Energ. Vale do Sapucaí - Brazil	Monitoring of process	Consuting
Flour Mills - Nigeria	Calculation and dimensioning of all pressure vessels (evaporators, vacuum pan and heaters) - Refinery Lagos	Consuting
Grupo BSM - Mexico	Monitoring process (Ingenios Constanca, Queseria, San Rafael, San Francisco and San Miguel del Naranjo)	Consuting
Grupo Piasa - Mexico	monitoring process (Ingenios Adolfo Lopez Mateos and Tres Valles)	Consuting

Year 2011

Metalurgica Rio Grande - Brazil	16 Pressure Vessels (design farnesene plant - Usina São Martinho / Amyris)	Executive project
Usinas Itamarati - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
Solazyme - Brazil	Sugar plant, ethanol and energy - 4.000.000 tcane / year (greenfield)	Viability study and basic project
JW Sugar Mills - Pakistan	Calculation and dimensioning of pressure vessels	Consulting
Grupo Piasa - Mexico	Sugar maturing silos	Viability study and basic project
Pedra Agroindustrial - Brazil	Evaluation sugar driers	Basic project

Year 2012

Agropecuária Monte castelo - Brazil	Evaluation drying plant	Consulting
Grupo Noble - NG Bioenergia - Brazil	Adequacy dryers / sugar coolers	Detailed and executive project
Bunge - Unit Pedro Afonso - Brazil	Flexibility of ethanol lines for reservoirs	Detailed project
Grupo energético Pedras de Goiás - Unit Safira - Brazil	Implementation of Unit Safira (Greenfield) - Ethanol and Energy	Viability study
Nordzucker - Germany	Balance of mass and energy (diagnosis and optimization)	Viability study
Raizen - Unit Caarapó - Brazil	Expansion unit Caarapó of 12.000 to 27.000 TCD	Basic project
Grupo energético Pedras de Goiás - Unit Safira - Brazil	Implementation Unit Safira (Greenfield) - Etanol e energia (frozen)	Basic project
Bunge / Solazyme - Brazil	Optimization of the balance of mass and energy to Unit Moema - Power supply to plant Solazyme	Viability study
Bunge - Unit Guariroba - Brazil	Optimization of the balance of mass and energy - increased capacity and reduction process steam consumption	Viability study
Bunge - Unit Frutal - Brazil	Optimization of the balance of mass and energy - increased capacity and reduction process steam consumption	Viability study
Bunge - Unit Ouroeste - Brazil	Optimization of the balance of mass and energy - reduction process steam consumption	Viability study
Bunge - Unit Itapagipe - Brazil	Optimization of the balance of mass and energy - reduction process steam consumption	Viability study

Year 2012

Deharki Sugar Mills - Pakistan	Falling Film evaporator - 4500 m ²	Executive project
Grupo BSM - Ingenio San Miguel del Naranjo - Mexico	Dryer sugar - 1500 t / day	Detailed and executive project
Bunge - Unit Pedro Afonso - Brazil	Steam piping design - the turbine extraction for thermal deaerator	Detailed project
Hamza Sugar Mills - Pakistan	Complete evaporation - falling film evaporator - 5000 m ²	Executive project
Grupo Guarani - Unit Cruz Alta - Brazil	Reduction of the amorphous sugar temperature	Basic project
Raízen - Brazil	Diagnosys and optimization (balance of mass and energy) - Units Diamante, Araraquara and Univalem	Viability study
Tongaat Hullet - Unit Amatikulu (Aveng) - South Africa	Maximum Power Cogeneration to export (balance of mass and energy - Optimization)	Viability study
Raizen - Unit Caarapó - Brazil	Complement expansion project to 27,000 TCD, with the inclusion of anhydrous ethanol	Basic project
Raízen - Brazil	2G Ethanol Plant	Viability study
GIZ - Ingenio Central Motzorongo - Mexico	Energy saving study and implementation of cogeneration	Viability study
Usina São Martinho - Brazil	Optimization of energy and increase production capacity - 50,000 TCD	Viability study
Bioenergia Brasil - Brazil	Barometric condensers - 20.000 kg/h	Executive project

Year 2012

Usina São Martinho - Brazil	02 Fast Clarifier	Detailed and executive project
Bunge - Unit Pedro Afonso - Brazil	Update the 3D model	Detailed project

Year 2013

Simisa / BP - Unit Trpical - Brazil	Adequacy dryer / cooler sugar 750 t / day	Detailed and executive project
Bunge - Unit Itapagipe - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
Ingenio Del Cauca - Incauca - Colombia	02 tanks flash recovery (cigar) + 01 direct contact heater (DCH) - condensate heating with flash steam	Detailed and executive project
Cargill - Unit São Francisco - Brazil	Corn dry mill - Ethanol plant	Detailed project
Destilaria Cachoeira - Brazil	Cooling System	Consulting
Raizen - Unit Caarapó - Brazil	Caarapó Unit Expansion of 12,000 to 27,000 TCD	Detailed project and monitoring
FCS Engenharia - Brazil	Training course - centrifuging, drying and storage of sugar	Consulting
Locan Equipamentos - Brazil	Calculation mezzanine structure	Consulting
Bunge - Unit Frutal - Brazil	Operational support in the harvest	Consulting
Usina Santa Isabel - Brazil	Technical evaluation of sugar dryers/coolers	Consulting
Usina São Martinho - Brazil	Fast clarifier - SRI type - 300 m ³ /h	Detailed and executive project
Usina São Martinho - Brazil	02 vertical tubular heaters - 450 m ²	Detailed and executive project

Year 2013

Usina São Martinho - Brazil	Dryer / cooler sugar 1 500 t / day	Executive project
Ingenio Tres Valles - Mexico	Installation of monitoring the new sugar bagging	Consulting
Destilaria Cachoeira - Brazil	Implementation rectifier column of ethanol	Basic project
Cargill - Unit Castro - Brazil	Expansion of the starch plant capacity	Basic project
Bunge - Unit Sta Juliana - Brazil	Juice treatment adequacy and collection system and transport bagacilho	Detailed project
Usina São Martinho - Brazil	Modernization / expansion to 50,000 TCC (juice treatment, evaporation, baking and drying sugar)	Detailed project

Year 2014

Usina Alvorada - Brazil	Study expansion to 400 and 450 TCH (mass and energy balance, equipments list and investments.	Viability study
Nordzucker - Germany	Technical visits to plants	Consulting
Ingenio Central Izalco - El Salvador	Reduction process steam consumption	Basic project
Usina São Martinho - Brazil	Additional scope - Juice treatment, screw conveyor and cyclone for bagacilho	Detailed and executive project
SJC Bioenergia - Brazil	Corn dry mill - Ethanol plant - Fermentation	Detailed project
SJC Bioenergia - Brazil	Corn dry mill - Ethanol plant - Yeast propagation	Detailed project
Raizen - Unit Caarapó - Brazil	crushing ramp 16,500, 17,500 and 21,000 TCD	Basic project
Bunge - Unit Santa Juliana - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
SJC Bioenergia - Brazil	Corn dry mill - Ethanol plant - Corn unload	Detailed project
Bunge - Unit Guariroba - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
Raizen - Unit Caarapó - Brazil	Additional scope - Expansion Unit Caarapó 27,000 TCD	Detailed project
Bunge - Unit Guariroba - Brazil	Improvements Falling Film evaporation	Detailed and executive project

Year 2014

Bunge - Unit Frutal - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
Bunge - Unit Pedro Afonso - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
Bunge Solazyme - Brazil	Balance of mass and energy (diagnosis and optimization)	Viability study
Grupo Guarani - Brazil	Evaluation of the receiving and preparation of cane system (all units)	Consulting
Ottani - Piracicaba - Brazil	Calculation of pressure vessels	Consulting
Bunge - Unit Moema - Brazil	Study for reduction of water consumption (mass and energy balance - diagnosis and optimization)	Viability study

Year 2015

Grupo Zilor - Brazil	Operational courses (juice treatment, decanting, evaporation and crystallization)	Consulting
Bunge - unit Itapagipe - Brazil	Improvements in syrup flotation	Basic and detailed project
Bunge - Unit Guariroba - Brazil	Operational monitoring Falling Film evaporator	Consulting
Sheikhoo Sugar Mills - Kenya	Falling Film evaporator 4000 m2 and drag separation	Executive project
Grupo Guarani - Brazil	energy improvements - Units Severinia, Mandu, Andrade and Vertente	Viability study
Usina São Martinho - Brazil	Review - condensate pipe cigar	Detailed project

Year 2016

Bunge - Unit Guariroba - Brazil	Operation Monitoring	Consulting
Locan - Brazil	Calculations of steel structures	Consulting
Locan - Brazil	Course PVElite and SAP2000	Consulting
Ingenio Adolfo López Mateos - Mexico	Technical advice in the drying area and bagging	Consulting
Ingenio Tres Valles - Mexico	Technical advice in the drying area and clumping of azucar	Consulting
Araporã Bioenergia - Brazil	Technical advice in the process - color sugar	Consulting