Sugar Engineering

- Strategic Planning and Feasibility Studies
- Sugar Technology Selection
- Project Structuring and Funding
- Design and Engineering
- Project Delivery
- Operational Support and Training
About Bosch Projects

Bosch Projects is a member of the Bosch Holdings group of companies which was established in 1961 and is now the leading multi-disciplinary Consulting, Project Engineering, Construction and Operations Management group in Africa.

We provide cost effective, quality solutions through innovative engineering in order to meet the needs of our clients. Our world class capabilities range from consulting through to multi-disciplinary design, engineering, project and construction management for small and large scale projects.

Services
We offer the following specific services to our clients:

Strategic Planning and Feasibility Studies
- Fatal Flaws analysis, Pre-feasibility and Bankable Feasibility studies
- Evaluation of techno/economic factors affecting sugar, ethanol, co-generation and by-product production at Brownfield and Greenfield sugar factories

- Strategic input to Client’s team as required
- Due diligence appraisals of sugar factories for investment purposes
- Lenders technical adviser
- Project structuring and funding

Sugar Technology Selection
- Techno/economic evaluation of equipment and new technologies in order to maximise return on investment
- Appraisal and introduction of appropriate Brazilian technology to Clients (sugar and ethanol) through our Brazilian office
- Specific R&D requirements in conjunction with the Client
- Specialist sugar equipment designs at competitive costs
- By-product development
Design and Engineering
• Multi-disciplinary integrated design and engineering capabilities that include process, mechanical, electrical, process control automation, civil and structural disciplines for small and large scale projects
• Energy and Mass Balance modelling (sugar, ethanol and co-generation)
• Sugar process engineering
• 3D laser scanning
• Process Flow Diagrams (PFDs) and Piping and Instrumentation Diagrams (P&IDs)
• Front End Engineering Design (FEED)
• Brownfield factory capacity upgrades and performance improvements
• Factory thermal energy improvements
• Steam and Power generation plant integration and cogeneration
• Design of new, high efficiency, low cost sugar factories, ethanol plants and refineries
• Design of sugar handling, conditioning and storage silos, packaging and warehousing plants
• Advanced design capacity including CAD 3D modelling
• Design of trash separation and recovery systems
• Electrical network capacity studies for plant expansions
• Power system modelling/simulations using PowaMaster and DigiSilent software
• Grid connected generation compatibility studies
• Lighting Designs
• Power factor correction designs
• Design of 132kV-33kV substations and switchyards
• Design of HV/MV overhead lines up to 132kV
• General plant MV and LV distribution design
• Design of motor control centres (E&I)
• Specific Engineering and Draughting services as required
Project Delivery

- Owners Engineer Role
- Project and construction management for small and large scale projects
- HAZOP studies
- Project planning and schedule management
- Change control
- Cost control
- Quality management (ISO Certified)
- Health and Safety management
- Compilation of a suite of FIDIC, NEC3 and bespoke contracts
- Compilation of enquiry documents for EPC and EPCM contracts
- Technical and commercial tender adjudication
- Contract administration
- Procurement management
- General compliance service
- General claim adjudication

- Contractual dispute prevention and resolution prior to mediation and arbitration
- Identification of international procurement opportunities and low cost fabrication workshops in China, India, Indonesia, Brazil, South Africa and Thailand
- Specific project personnel as required
- EPCM contract implementation

Operational Support and Training

- Diffuser and mills performance improvement programmes
- Process audits and troubleshooting
- Operations planning
- Engineering and laboratory audits
- Best practice benchmarking
- Management of performance improvement projects
- Temporary operational staff placements
- Training (through Bosch Ulwazi training academy)

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