PT GLOBAL MANDIRA SAKTI

Company Profile
An Integrated Solution to Your Plant
PT Global Mandira Sakti (GMS) as member of Global Group Companies is a fast-growing National Company engaged in Engineering, Procurement, and Construction with core business in providing highly specialized supplies and services to various industries in Indonesia, especially in Oil & Gas Production Facilities, Refinery Plant, Power Plant, Cement Plant, Mining Industries, Petrochemical, Airlines and Airport Facilities.

Backed up by highly dedicated and professional experts, GMS has fully committed to support our client to meet their project goal through the provision of reliable, innovative, and competitive services using the best international practice.

GMS is a strong partner offering project elaboration, engineering and design, field assembly and commissioning, as well as comprehensive service activities, for complete production lines, equipment products supply, plant conversions and upgrades.

We provide support from turnkey construction to plant expansions and projects, and offer expertise for all project management, process design, engineering, procurement, and construction activities.

**Vision & Mission**

*Our vision* is to be the first choice provider for value-added services that supported by multidiscipline engineering combined with effective and comprehensive training. *Our mission* is to deliver cost-effective, high quality and reliable value-added services for any related matter revealed above.

**Corporate Values**

*To Our Customers:* we value our customers and will continue to value-add their business. We commit ourselves to actively improve our services.

*To Our Employees:* we recognize that all our people are important stakeholders of the company. We care for our people by creating a conducive work environment, helping them to their fullest potential and recognizing their contributions.

*To Industry and Society:* we pledge to be a responsible corporate by acting professionally and ethically in all manners.
Our Stands

- Provide a healthy and safe workplace environment
- Provide all of our services and technologies at the highest level of quality
- Create and foster client relationships based on trust and respect
- Unconditionally honest with our clients
- Innovative in creating and measuring value
- Invest in the development and transfer of technologies and skills
- Use sustainable-development principles

❖ GMS Provides

**Project Implementation**
- Engineering
- Procurement
- Construction
- Commissioning
- Project Management

**Operational Services**
- Operational Startup
- Maintenance Support
- Production Support
- Inspection Services
- Operational Improvement and/or Modification
- Engineering Support

**Product Supplied**

❖ **Refractory**
- Casting
- Injection
- Gunning
- Ramming
- Brickwork
- Fiber installation

❖ **Thermal Insulation**
- Hot Insulation
- Cold Insulation
Our culture of collective problem solving ensures that the whole resources of the company are made available for all projects. A continuous program of technology transfer is designed to assure that our expertise is maintained and enhanced. As well as conforming to the norms for quality assurance, our internal quality and control procedures guarantee the delivery of successful, timely, and cost effective projects.

When you select GMS as your partner, you also bring our solid foundation and support to your business.

**Supply Refractory and Your Part**

To power your operation while lowering consumption we provide you with highly quality of refractory, high efficient equipment an industrial part supply, distribution and conditioning. Using quality of our supplied products helps you achieve industry leading productivity.

**Our Supplied Products**

- Refractories, include design, supply, install and inspection

**Engineering and Design Your Plant**

GMS with its strong domestic and regional partner offering project elaboration, engineering and design. Our efforts have been focused to serve companies to solve their technical problems, improve their performance, upgrade their capacity trough minimum changes and achieving their goal in process optimization.

**Our Services Area**

GMS offers full service in the area of Front End Engineering Design (FEED) and detailed design for Petrochemical Processing Plant, Cement and Mining Plant, Combined Cycle Power Plant, Airport Supporting Facilities, Oil/Gas Production Facilities, Process Equipment Skid, Environment Monitoring and Control Facilities, and to provide task force for particular project at the clients options.
To serve all client sectors, GMS and partner’s expertise incorporates all major disciplines of engineering including Civil, Structural, Mechanical, Piping, Electrical as well as areas of specialist design including Process Control, Structural Assets and Equipment Design.

Our teams are equipped with the latest tools and technologies including computational fluid dynamics and many types of simulation software. Our teams are also able to access the multi-discipline and multi-industry expertise through practice, expertise directories and peer networks.

**More About Our Engineering Services**

**Conceptual Design**
- Strategic consulting and risk assessment
- Project definition
- Feasibility and preliminary studies
- Process flow sheet development
- Process scale-up
- Mass and heat balances and simulation
- Technology assessment and selection
- Process equipment specification, selection and sizing

**Detailed Engineering**
- Ensure process and operations requirements are incorporated in the design
- Process control and system specification
- Process equipment specification and tender
- Piping and instrumentation diagram development
- Value engineering review
- Safe plant design, hazard and operability reviews

**Operations Assistance**
- Commissioning, start-up and operations assistance
- Assistance in establishing operator training programs
- In-plant troubleshooting and process optimization
- Hazard and operability reviews, safety audits
- Energy and environmental projects
- Development of operations manuals
- Plant debottlenecking

**Engineering Project Highlight**
Performance enhancement of plant equipment such as : cyclone, dust collector, preheater, kiln, calciner, UF/RO and WWT equipment, drying, HE, pressure vessel, revamp/rebuild pump, valve, compressor etc
Acting as partner as well as advisor to our clients, we ensure the success of a project whilst minimizing its overall cost. By appropriately sub-dividing a project, the best equipment can be sourced from multiple suppliers using both local and foreign services and fabrication in order to assure quality, cost and schedule.

Our Focus Area of Management

GMS manage all phases of a project from initial concept through sourcing of finance, engineering design, equipment selection and procurement, project execution, commissioning and operational assistance.

Engineering Procurement Construction

GMS offers to its client construction and erection supervision, inspection on manufacturer and Factory Acceptance Test assistance, on site Pre-Commissioning and Start-Up Teams, providing skilled technical and non technical personnel either on daily bases or under a lump sum contract

GMA and partner have to be reliable EPC (Engineering Procurement Construction) for thermal power plant, refinery, cement and petrochemical process. The project steps are guarantee by an experienced solid teamwork from preparation to operation stage improvement in design ability, fabricating and installing ability supported by engineering, procurement fabrication and installation ability will reinforce to do the project developments stages from feasibility study until commercial operation.

More About Our Construction Management Services

GMS and partners maintains an effective ability to plan, execute and complete projects by applying well-developed systems and programs driven by a philosophy of early construction involvement with a focus on facility startup. It practice maintains an integrated management and communication network that supports business unit objectives by developing and implementing strategies, optimizing people resources, championing technology tools and bringing consistency across operations while assuring a high level of certainty for safety, performance, quality, cost and schedule.

- Working safely
- Alignment with project goals and client's team
- Projects are execution driven
- An experienced leadership team
- Full capabilities in all elements of construction management
- Ability to do construction management globally
- Front-end loading to minimize uncertainties
- Early implementation of construct-ability program
- Modularization and pre-assembly program
- Construction work packages
- Workface planning management program
- Effective integration of engineering, procurement, construction and commissioning
GMS manages capital programs and process-area construction projects management. The scope of services includes project management, planning, cost control, procurement and contracts management, expediting and management of on-site construction and commissioning.

Early in the project cycle, GMS Commissioning coordinates activities with the owner, engineering, procurement and construction to enable activity sequencing for a quick start-up.

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GMS Commissioning ensures quality people on site to handle all pre-operational testing and commissioning phases. Our purpose is to inspect and test plant components, ensuring facilities are in accordance with the project design. Thorough testing of plant systems with product are conducted to ensure design performance is met. Our commissioning services support the ramp-up of the plant throughput to the design level.

Principal activities for a successful plant commissioning:

- Prepare commissioning manual
- Complete equipment list
- Complete P&IDs
- Scope P&IDs (identify commissionable systems)
- Develop commissioning schedule
- Agree on construction schedule
- Develop commissioning plan
- Staff for commissioning
- Construction handover, inspections and documentation
- Commissioning tests
- Commissioning handover, inspection and documentation
- Trials and ramp up (commissioning assist operations)

As the final step in project execution, we understand the importance to complete the work quickly and as such we work diligently with detailed planning to provide our clients a rapid ramp up.
GMS brings together with its partner services that concentrate on effective project ramp up and optimization of plant operations. Our core objective is to create value by offering smarter and more efficient solutions to operating issues, supporting our clients' focus on their core businesses.

Our solutions are tailored to our client’s expectations including: technical, advanced automation and production systems.

GMS experts offer a broad range of knowledge and experience that will be applied to operational effectiveness, often with the view to reduce the need for capital investments. Project close-out analyses show that GMS technologies and operations know-how can often deliver fresh revenue.

Refractory Services
Being its strategic GMS is committed to timely delivery of advanced products and quality services needed by the clients. GMS does not only perform its business alone but has become one of spearheads in the transformation of technological resources. Coming into global era and free market GMS has made its preparation by making enhancement in technology and professionals through a proper long-term strategy and synergy, making perfection steps in operational, business and management, with domestic and regional partners who have marvelous records in technology and market access.

Our partner are recognized regional for their process and technology expertise in the cement, petrochemical and mining industry. This strong process base is a key differentiator in the marketplace of consulting engineering services.

- **PT Boma-Bisma-Indra (BBI) Persero**
  
  *as Our Local Partner in Supply Industrial Equipment and Services*

As a National Strategic Industry and modern company, equipped with well technology and equipment, BBI produces engine plant and industrial equipment, focusing in power generator, automotive application, pumps set, earth moving machinery agro based industry and more also covers EPC, Industrial Plant Equipment, and Industrial General Services.

BBI high technology product has been proven by the international use of its product in several countries in the world. Asia (China, Japan, Yemen, Egypt, Union of Emirate Arab, Lebanon, Singapore, Malaysia, Myanmar, Philippine and Thailand), Europe (Belgium and Russia), America (Trinidad).

Since 1991, BBI product qualify has resulted certificate in management, ISO 9001 : 2000 and ASME certificate for boiler, pressure vessel, etc. BBI’s products are Sterilizer of CPO Plant, Feed Dryer, Condenser, Boiler, Separator, Piping, Compressor Mix Refrigerant, Cryogenic Vessel, Flange Rotor Spider, HP Heater, Mill Roller for Sugar Factory, Brake Drum

BBI supported by Japanese partners from world leading company specially upstream design engineering for thermal power plant, refinery oil and gas industries projects, which are:

BBI to perform Project Management Services for steam power plant, conveyor ammonia planr cyclone cement plant, tank of petrochemical plant, doing Engineering Procurement Construction for thermal power plant, refinery and petrochemical plant

BBI provides several services include: Casting, Calibration Service & Testing, Precision Machinery Center, Maintenance service and control system, Forging and Agro industry equipments
Cemtech provides engineered processing equipment and services to the mining and cement industries, which portfolio include of feasibility study, detailed engineering, project execution, plant operation, improvement, upgrading and plant rehabilitation.

With experience more than 20 years in cement industry, Cemtech use every kind of equipments and processes and have the thousand record of TCO which confidently assist the customer to select the best equipments, obtain the most competitive offer from the suppliers and keep the cost in the budget.

Cemtech provide Feasibility Study Service include of : Plant Assessments, Preliminary Engineering, Design and Specification, Project Implementation, Estimated Investment; Basic Engineering Deliverables will refine the freezing of all aspects of the technical concept including flow-sheet, layout, typical plant and equipment arrangement drawings, main equipment and storage capacities. Elaboration of control/automation system; Detailed Engineering Service,

Both if clients choosing turnkey or semi turnkey, most of engineering work is done by the suppliers, Cemtech (act as Owner's engineer) will review and supervise the supplier's engineering and while choosing full detailed contracting and buying the equipment from the OEM supplier, Cemtech (act as Designer) will review and design the interfacing and other connecting equipment/par as well.

Our Principal

- Herbison Walker Refractory - USA
- Donaldson - USA
- Quartis - UK (Refractory Inspection)
- Upking Kurimoto, Wear Steel specialist
<table>
<thead>
<tr>
<th>Year</th>
<th>Client</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>SMELTING CORP - GRESIK PLANT</td>
<td>Installation Service of Electrical &amp; Instrumentation Work Package, WWTP and Acid Plant, Smelting Corporation, Gresik</td>
</tr>
<tr>
<td>2001</td>
<td>DEVON ENERGY - TUBAN</td>
<td>Installation Service for Gas Detection System, CPA, Devon Energy – Tuban, East Java</td>
</tr>
<tr>
<td>2001</td>
<td>PDAM ADYA TIRTA - BATAM</td>
<td>Engineering Design, Supply, and Installation of Water Level Telemonitoring Package, PDAM Adya Tirta, Batam</td>
</tr>
<tr>
<td>2002</td>
<td>NUSA HALMAHERA MINERAL</td>
<td>Supply Asphalt Sprayer Machine, 5 Unit, PT. Nusa Halmahera Minerals, Gosowong Project, Maluku</td>
</tr>
<tr>
<td>2002</td>
<td>SORINI CORP - PASURUAN</td>
<td>Operation and Maintenance of Co-generation Plant, Total Capacity 10.8 MW, 1 Year Contract, PT. Sorini Corporation, Pasuruan</td>
</tr>
<tr>
<td>2002</td>
<td>TRUBA JURONG</td>
<td>Preliminary Engineering Design for Depo BBM – Cikampek, Truba Jurong – Indokomas Buana Perkasa Consortium</td>
</tr>
<tr>
<td>2003</td>
<td>WIJAYA KARYA PT.</td>
<td>Supply and Install HDPE Geomembrane, PT. Wijaya Karya for Tabing Duku Project, Padang</td>
</tr>
<tr>
<td>2003</td>
<td>NUSA HALMAHERA MINERAL</td>
<td>Operation and Maintenance of Co-generation Plant, Total Capacity 2.8 MW, 1 Year Contract, PT. Nusa Halmahera Minerals, Gosowong Project, Maluku</td>
</tr>
<tr>
<td>2003</td>
<td>BERAU COAL PT.</td>
<td>Supply and Install Water Pump using Solar Panel System, PT. Berau Coal, East Kalimantan</td>
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<tr>
<td>2003</td>
<td>ALAM BERSEMI PT.</td>
<td>Preliminary Engineering Design of Crude Oil Gathering Station, Wakamuk Field, Petrochina International (Bermuda) Ltd, Papua – Via PT. Alam Bersemi S.</td>
</tr>
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<td>2003</td>
<td>NUSA HALMAHERA MINERAL</td>
<td>Supply Monopump MDL CB021AC1R/G C\c/w motor and gearbox, 8 Unit, PT. Nusa Halmahera Minerals, Gosowong Project, Maluku</td>
</tr>
<tr>
<td>2004</td>
<td>NUSA HALMAHERA MINERAL</td>
<td>Supply HITACHI Electric Chain Hoist c/w trolley, 16 Unit, PT. Nusa Halmahera Minerals, Gosowong Project, Maluku Utara</td>
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<tr>
<td>2005</td>
<td>JAYA WIJAYA RAYA PT</td>
<td>Engineering Services, Blanket order for 1 year period, Semberah Field – East Kalimantan, PT. Jaya Wijaya Raya, Jakarta</td>
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<tr>
<td>2005</td>
<td>HOLCIM CEMENT - CILACAP PLANT</td>
<td>Refractory Supply and Install, Holcim Cement Cilacap</td>
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<tr>
<td>2006</td>
<td>CONOCO PHILIPS - GRISSIK FIELD</td>
<td>Waste Heat Boiler Refractory Repair, Conoco-Philips, Grissik Jambi</td>
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<tr>
<td>2007</td>
<td>NUSA HALMAHERA MINERAL</td>
<td>Supply and Install Zinc Dust Screw Feeder 5/8” Diameter, 2 Unit, PT. Nusa Halmahera Minerals, Gosowong Project, Maluku</td>
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<td>2007</td>
<td>MEDIA KARYA SENTAUSA</td>
<td>Engineering Services of Gas Booster Compressor Station for PJB Muara Tawar</td>
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<td>2008</td>
<td>MEDIA KARYA SENTAUSA</td>
<td>Construction Services for Gas Booster Compressor Station for PJB Muara Tawar</td>
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<td>2008</td>
<td>MEDIA KARYA SENTAUSA</td>
<td>Construction, LPG Plant cap 40 MM, Media Karya Sentosa, Gresik-East Java</td>
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<td>Company/Project</td>
<td>Description</td>
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<td>2008</td>
<td>PERTAMINA - UP VI BALONGAN</td>
<td>Refractory Total Inspection, Pertamina UP VI Balongan, for Overhoulle Preparation</td>
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<tr>
<td>2008</td>
<td>INCOMENT - PLANT 12 TARJUN</td>
<td>Resin Replacement services for Demineral Water Plant, Indocement, Tarjun – South Kalimantan</td>
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<tr>
<td>2008</td>
<td>SENTANI AIRPORT</td>
<td>Design, Supply, and Install Runway Visual Range System to Juwata, Kalimarau, Sultan Ba’abullah, and Sentani Airport</td>
</tr>
<tr>
<td>2008</td>
<td>AES AGRIVERDE</td>
<td>Design, Supply, and Install Flare Gas System, AES Agriverde, North Sumatra</td>
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<td>2008</td>
<td>CONOCO PHILIPS - GRISSIK FIELD</td>
<td>Waste Heat Boiler Refractory Repair, Conoco-Philips, Grissik Jambi</td>
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<tr>
<td>2009</td>
<td>WASKITA KARYA PT</td>
<td>Retaining Wall Bridge Oprit for Fly Over Duku, Padang</td>
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<tr>
<td>2009</td>
<td>INDOCEMENT - PLANT 12 TARJUN</td>
<td>Refractory Installation, Indocement P12 Batulicin</td>
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<tr>
<td>2009</td>
<td>PT ANEKA TAMBANG Tbk - POMALAA</td>
<td>Project Management Construction (PMC)</td>
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</tbody>
</table>
CONSTRUCTION: GAS BOOSTER COMPRESSOR FACILITIES - MUARA TAWAR

WATER PIPING FACILITIES - INCO SULAWESI

CONSTRUCTION: 40 MM SCFD LPG PLANT - GRESIK