

## BOARD MEMBERS

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President & CEO  
MSc. Civil Engineering, Civil Engineer

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Vice - President  
Attorney

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Executive Managing Director  
Electromechanical Engineer

Raul Delgado E.  
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MSc. Construction Engineering and Management, Civil Engineer

## SENIOR MANAGERS

Edgar Castillo  
Highways Manager  
MSc. Engineer Consulting, Civil Engineer

Cesar Montero  
Electrical Energy Manager  
MSc. Electrical Engineering, Electrical Engineer

Tania Castañeda  
Hydraulic and Irrigations Manager  
Civil Engineer

Luis Moreno  
Mining and Industry Manager  
Electromechanical Engineer

Manuel Caceres  
Metros and Railways Manager  
Civil Engineer

Tania Castañeda  
Sanitation Manager  
Civil Engineer

Jesus Abugattas  
Buildings Manager  
MSc. Engineer Consulting, Civil Engineer

Cesar Delgado  
Environmental Manager  
MSc. Environmental Management, Architect

Luis Moreno  
Hydrocarbons and Petrochemistry Manager  
Electromechanical Engineer

Jesus Abugattas  
Ports Manager  
MSc. Engineer Consulting, Civil Engineer

Jesus Abugattas  
Health Manager  
MSc. Engineer Consulting, Civil Engineer

Rodrigo Delgado E.  
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MBA, Business & Marketing

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Highways Deputy Manager  
MSc. Civil Engineering, Civil Engineer

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Chief Financial Officer  
MBA, Economist

Juan Verastegui  
Management System and Project Control Manager  
MBA, Civil Engineer

Ricardo Gandolfo  
Legal Manager

Manuel Camasca  
Human Resources Manager

Orcides Camps  
Accounting Manager

Absalon Estrella  
Information Technology and Communications Manager

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## BRANCHES

• Colombia • Argentina • Panamá  
Representative: Lic. Carlos Quevedo R.

• Ecuador  
Representative: Lic. Patricia Oré C.

• Guatemala  
Representative: Lic. Carmen Uriona T.



**CESEL INGENIEROS**  
CERTIFICADO EN: ISO 9001, ISO 14001, OHSAS 18001

## GENERAL DESCRIPTION

CESEL S.A. is a peruvian private consulting firm with activity in Latin America, specializing in studies, design, work supervision and management of integrated projects in all areas of engineering. It was founded in 1972 and its headquarters is a modern building with 7 floors with a total of 10.000 m<sup>2</sup> of offices in Lima, Peru. It has a comprehensive computer network, advanced software engineering, laboratories, topographic equipment, vehicle fleet, an auditorium, among other installations, with all the facilities for development of engineering.

## PERSONNEL

Total: 850; Professionals: 600; Technicians: 150; Administrative: 100.

## SERVICES PROVIDED

Preliminary design, planning, pre-feasibility and feasibility studies, basic engineering, final designs, tender documents, detail engineering, supervision of civil works and equipment installation. Overall project management services including technical, economical and financial matters. Overall control, procurement services, construction management, factory inspection, and testing.

## MAIN PROJECTS

### ROADS

- IIRSA Southern Inter-Oceanic highway, Section 3 Inambari - Inapari Southern Road Corridor, Peru - Brazil (403 km). Supervision of the detailed engineering and construction.
- Billingham Bridge - Puerto Maldonado (723 m). Supervision of construction and assembly of Peru's longest bridge.
- Route N° 9, Paraguay. Supervision of 212 km rehabilitation works.
- Lima - Huancayo highway, 257 km, altitude up to 4800 m.a.s.l. Final design and works supervision.
- Chongoyape - Cajamarca highway, 320 km. Final design.
- Lambayeque - Olmos - Dv Piura highway. Rehabilitation and maintenance design. 254 km.
- Chalhuanca - Abancay highway. 119 km works supervision.
- Amatitlán - Palín highway, 7 km. Guatemala. Works supervision.

### ELECTRICITY GENERATION

- Machupicchu hydroelectric power station. Rehabilitation study and revamping up to 140 MW, 50 m<sup>3</sup>/s. Design of complementary civil and electromechanical works.
- Charcani V hydroelectric power plant, 135 MW, 10 km tunnel. Design review and works supervision. Detail design of Cincel dam 39 m high and 425.000 m<sup>3</sup> impoundment.
- San Gabán II hydropower plant, 110 MW, 7 km tunnel, 655 m gross head. Feasibility study, final and detail design.
- Ventanilla thermal power plant, 2 gas turbines, 100 MW each. Pipeline for oil, 4 km. Works supervision.
- Santa Rosa thermal power plant. Feasibility study for revamping to 300 MW combined cycle.

### TRANSMISSION SYSTEMS

- Central America electricity interconnection, 230 kV transmission line. 850 km tower spotting in Guatemala, Honduras and Nicaragua. Route selection, topography and right of way of 785 km in El Salvador, Nicaragua and Panama.
- Revamping and expansion of the national electrical system, program PE0018 PERU/BID. Included 220 kV and 138 kV transmission lines, substations, power operation center. Project management, design and supervision.
- Mantaro - Pachachaca - Callahuanca 220 kV, 270 km transmission line and 3 substations. Design and works supervision. Altitude to 5060 m.a.s.l.
- Mantaro - Caraveli - Montavo 500 kV, 750 km. Pre-operativity study. Final and detail design of 500 kV substations.

### WATER AND SEWERAGE

- Expansion and upgrading of sewerage system in Puntarenas, Costa Rica. Feasibility and final studies.
- Improvement of water and sewerage utilities in the Lima suburbs, 900.000 inhabitants. Final study and works supervision.
- Water and sewerage system of Cajamarca (135.000 inhabitants). Final study and works supervision.
- Expansion of the water and sewerage system of 10 cities in Piura, 700.000 inhabitants. Final design.
- Seven sewage treatment plants in Lima. Feasibility study.
- Taboada treatment plant to 14 m<sup>3</sup>/s of sewage study and analysis of the project.
- Huachipa drinking water treatment plant, 10 m<sup>3</sup>/s. Supervision of design, construction and equipment erection.

### ENVIRONMENTAL

- Operating procedures, prevention measures and oil leakages remediation of 9 multibouy type Berth and 5 piers in the coast and rain forest. Vulnerability study.
- Seepage control of polluting liquids in Cerro Verde mine. Final design and construction supervision.
- Closing plans for tailings ponds and underground mines in Andaychagua, Yauricocha, Cerro de Pasco, Shougang, Aruntani, Volcan, etc.
- Environmental impact study and mitigation ecological program for the hydropower stations San Gabán I and II (220 MW) and the Macusani dam.
- 8th Lot oil environmental remediation in Amazon rainforest. Design and works supervision.
- Acid water treatment plants for Cobriza, Sinchao and La Granja projects. Basic and detail engineering.

## IRRIGATIONS AND DAMS

- Chavimochic irrigation project, Package A, 18,4-km long tunnels and 10 km long channels, 82m<sup>3</sup>/s. For the improvement of 17.000 ha and fitting out of 18 600 ha of new lands; 223 m x 67 m desander. Investment: 160 million dollars. Design and works supervision. Feasibility and design of water intakes 90 m<sup>3</sup>/s.
- Palo Redondo dam, 370 m long and 106 m high. Supervision of the feasibility study.
- Macusani dam, 65 m high, impoundment of 110 hm<sup>3</sup>. Feasibility study and final design.
- Hydric strengthening of the Mantaro river. 5 reservoirs, 330 hm<sup>3</sup>. Feasibility study.

## MINING AND HEAVY INDUSTRY

- PLS and raffinate piping lines Northwest heaps. Toquepala, Southern Peru Cooper Corp. Basic and detail engineering.
- Copper mine and concentrator plant at Cobriza. Expansion of the plant capacity (10.000 t/day). Design.
- Cerro Verde II. Comprehensive Consulting Service / Project Management for the cooper Concentrator Plant (20.000 t/day).
- Cerro Verde cooper-molybdenum concentrator plant, 15.000 t sulphides per day. Improvement of the feasibility study.
- Comprehensive operative advice for Siderurgica of Chimbote Siderperu.
- Expansion of Arcata plant of 1750 t/per day. Final engineering.
- Toquepala plant expansion to 278 TPY. Basic and detail engineering.

## PORTS AND AIRPORTS

- River ports in Iquitos, Pucallpa and Yurimaguas. Design and works supervision.
- Expansion and modernization of the Port of Callao. Review of master plan, elaboration of basic and detailed engineering of the first stage for the expansion of Peru's main seaport.
- New container terminal in the southern area of the Port of Callao. Review of the design and supervision of the execution of construction and equipment. Callao, Lima, Peru.
- Airports in Contamana, Yurimaguas, Jaen and Tarapoto. Works supervision.
- Trujillo, Talara, Tumbes, Chachapoyas and Anta airports. Structural and functional evaluation of pavement.

## HEALTH

- Huancayo Regional hospital. Project management and works supervision (500 bed-capacity).
- Diagnostic of the maintenance systems of Health Ministry. Study of 9 hospitals, 13 health centers and 23 health points.
- Hemodialysis Center, 50-unit capacity, IPSS Hospital / Lima. Final design.
- Belen hospital in Trujillo, 400-bed capacity. New design and remodeling works supervision.
- Alberto Sabogal hospital. 157 beds, 9300 m<sup>2</sup>. Review design, works supervision.
- High complex hospital of La Libertad, 240 beds, 34 000 m<sup>2</sup>. Constructed area. Work supervision.

## METRO

- Metro network of Lima and Callao. Medium-term and long-term Network strategic plan. Preliminary project of the five lines of all the Metro networks, 137 km length, 115 stations.
- Line 1 of the Metro of Lima and Callao, section 1: Villa El Salvador - Av. Grau 21.5 km and section 2: Av. Grau - San Juan de Lurigancho 12.4 km. Design, work and assembly supervision.
- Line 2 and 4 of the Metro of Lima and Callao (underground); Line 2: Ate - Callao 27.3 km and line 4, section 1: Av. Faucett - Av. Gambetta 7.8 km. Design, work and assembly supervision.

## BUILDINGS AND URBAN DEVELOPMENT

- New Western South American headquarters - Aspersud. 6000 m<sup>2</sup>. Project management.
- Morococha's new city. 1050 houses, communal centers, etc. Integral project management for construction.
- National Stadium of Lima. Supervision of the integral rehabilitation.
- Grand National Theater. Construction and equipment supervision.
- Shopping Centers and Supermarkets. Project Management, 115.000 m<sup>2</sup>. (Open Plaza, Saga Falabella, Plaza Veja, 2 Sodimac, Tottus).

## HYDROCARBONS AND PETROCHEMICAL

- La Pampilla oil refinery. Design of the expansion of the pumping system and interconnection pipelines for residuals. Installation supervision of a 2,8 km long pipeline for oil.
- Talara oil refinery. Review, designs and works supervision of the liquid cargo dock. Group of 28-km pipelines for oil, pumping stations and tanks.
- Biodiesel Refinery. Ventanilla, Lima. Production: 180.000 gallons/day. Storage tanks of 150.000 m. Project management.