

Mohamed Khatab

Founder and Managing Director of CEC

Date of Birth : April 11, 1971
Nationality : Egyptian
Working Languages : Arabic, English

Education

- BSc Electrical Power Engineering, Cairo University, Egypt, 1993.

Registrations/Affiliations

- Egyptian Syndicate of Engineers, 1993.
- Egyptian Society of Engineers, 2013.
- Certified Electrical Consultant - Egyptian Syndicate of Engineers, 2010.
- Certified Electrical Consultant (Grade A) – UPDA Qatar, 2017.
- Electrical Reviewer “Committee for Review of Mixed Use Projects in Egypt” responsible for the review and approval of Mixed Use projects in Egypt – Housing and Building National Research Center (HBRC), Egypt, 2007.
- Member of the “Committee for Preparation of Egyptian Electrical Codes” – Housing and Building National Research Center (HBRC), Egypt, 2010.
- Member of the “Committee for Preparation of Egyptian Fire Protection Codes” – Housing and Building National Research Center (HBRC), Egypt, 2008.
- Member of the “Accreditation Committee for Engineers and Consultants” - Egyptian Syndicate of Engineers, 2012 - 2015.

Summary of Capabilities

- **Mr. Khatab** is MEP Director with experience spanning 25 years in management, design and supervision of MEP works for numerous local and international projects including but not limited to: mixed-use complexes, hotels, distribution networks, substations, residential towers, infrastructure utilities, airports, hospitals, recreational, tourist, educational buildings, industrial and storage facilities, oil & gas facilities and water / waste water treatment plants.
- **Mr. Khatab’s** wide experience obtained during his employment in one of the international professional project management company (*QPM*), one of the top international engineering design firms (*WorleyParsons*) and one of Australia’s leading

international consulting firms (*GHD*) as well as one of the world's well established and recognized international consulting organizations (*Dar Al-Handasah*) and one of the top specialized MEP design offices (*SCG*).

- **Mr. Khatab's** experience record includes over 100 projects in various countries including Qatar, Egypt, UAE, Saudi Arabia, Australia, Tajikistan, Kuwait, Jordan, Angola, Iraq, Algeria, Bahrain, Lebanon and Yemen. This experience in a variety of countries and project types along with his substation background in supervision and commissioning of work has allowed Mr. Khatab to define multiple approaches for delivering MEP works to meet Client's unique requirements.

Key Qualifications

- Setting up design concepts; developing tender and contract documents including the preparation of technical specifications and bills of quantities.
- Establish project delivery strategy, developing the job plan, quality plan, securing resources, establishing work briefs and budgets.
- Establishment and satisfactory completion of the project with an emphasis on client needs, technical solutions and timely performance leading to client satisfaction.
- Design Review and Value Engineering.
- Prequalification and evaluation to Consultants and Contractors.
- Tenders evaluations and recommendation.
- Equipment testing, systems start up and commissioning.

Professional Experience

Period : 2014 - present

Employer : **Creative Engineering Consultants (CEC)**

Position : Managing Director

- CEC is an MEP Consultant firm responsible for the design of all MEP works for different projects. Responsibilities include planning of distribution networks, setting up design concepts; developing preliminary and detailed designs; and preparing technical specifications, bills of quantities as well as tender and contract documents.

Period : 2010 - 2014

Employer : **Qatar Project Management (QPM)**

Position : MEP Technical Manager

- Manager of the Electrical & Mechanical department responsible for the design management, project management & construction management of all Electrical, Mechanical & Plumbing works including prequalification & selection of the consultants and contractors.

Period : 2009 - 2010

Employer : **WorleParsons**

Position : Electrical Department Lead

- Responsible for the department's electrical team, including management, supervision, revision and coordination of all design activities and deliverables within the department including the preparation of FEED design, detailed and construction engineering.

Period : 2005 - 2009

Employer : **GHD**

Position : Electrical Department Manager

- Responsible for managing all aspects of the electrical department including the design, coordination and management of Mutli-disciplinary projects in the Middle East. Also, assigned as a Technical Coordinator among the Middle East offices on one hand and between Middle East & Australian offices on the other hand.

Period : 1995 - 2005

Employer : **Dar Al-Handasah Consultants**

Position : Senior Electrical Engineer & Group Leader

- Responsible for the projects' design, coordination, tendering and project management of all Electrical systems for the different projects in the Middle East and Africa. Design responsibilities includes planning of distribution networks, setting up design concepts; developing preliminary and detailed designs; and preparing technical specifications, bills of quantities as well as tender and contract documents.

Period : 1993 - 1995

Employer : **Shaker Consultancy Group (SCG)**

Position : Electrical Engineer

- Design team member Participated in the design of electrical works for several projects.

SAMPLE OF CREATIVE ENGINEERING CONSULTANTS (CEC) PROJECTS

A. Buildings Projects

BSTC Tower, Jeddah, Saudi Arabia. Design of mixed use tower of 47 floors and with total built-up area of almost 80,000 square meters. The project consisting of Hotel from 1st floor to 16th floor, Hotel Service Apartments from 17th floor to 26th floor and Offices from 28th floor to 46th floor. This is in addition to 6 levels parking building adjacent to the tower for car parking, drivers' quarter & staff accommodation.

Royal Collage International School, Cairo, Egypt. Design of an international school consists of Basement level, Ground floor, First & Second floors and roof floor and located on a plot of land with approximate 15,000 m² and built-up area of 20,000 square meter.

Bayat Plaza Twin Towers, Jeddah, Saudi Arabia. Design of two residential towers on a plot of land that totals 10,000 square meters and has a total built-up area of almost 100,000 square meters. The project consisting of Podium and Tower (T1) on top of with 24 residential floors and Tower T2 on top of the with 33 residential floors.

Medical Center, Jeddah, Saudi Arabia. Design of medical with total built-up area of almost 11,650 square meters of medical clinics, day surgery hospital and service areas.

New El Haraj Souq, Doha, Qatar. Design of Souq that has a total built-up area of almost 60,000 square meters of shops, offices and service areas.

Albayt 58 Complex Tower, Riyadh, Saudi Arabia. Design of mixed use complex consists of one residential tower (with 48 floors) and one commercial tower (with 41 floors) with total built-up area of almost 130,000 square meters.

Khamees Mall, Abha, Saudi Arabia. Design of mall located on a plot of land that totals 85,000 square meters and has a total built-up area of almost 120,000 square meters of shops, retails, hypermarket, anchor stores, food court, kids' area, etc.

Al Shareef Headquarters, Energy City, Doha, Qatar. Design of an office building located in the Energy Center which is part of Lusail area, Doha, Qatar and located on a plot of land of almost 5,000 square meters and consisting of two underground parking floors, Ground floor for mixed use and four offices floors.

Faculty of Medicine, Nahda University, Egypt. Design of 8 storey faculty building with total built up area of almost 13,600 m²

Fox Hill Residential Buildings, Lusail, Doha, Qatar. Design of residential complex consistent of 2 adjacent residential buildings (F08 with total built up area of 7,000m² and F09 with total built up area of 9,000m²)

Fayoum International Hospital, Fayoum, Egypt. Design of hospital building on a plot of land of almost 3,000 square meters and with a total built-up area of almost 22,000 square meters and includes 150 beds, 9 operation rooms and 2 linear accelerators.

Al-Aziziah Hotel, Al-Khobar, Saudi Arabia. Design of hotel located on a plot of land with approximate foot print area of 7,756 square meters and with approximate total built up area of 15,850 square meters.

Baobab College, Zambia. Design of the Management & Administration building for Baobab College in Zambia and consisting of Ground, Mezzanine & First Floors.

PI-Park Sales Center and ElSweedy Technical Academy (STA), Egypt. Design of building consists of Ground floor, First floor, Second floor and roof level. The project divided to two main areas, Sales Center of El-Sweedy PI-Parks and ElSweedy Technical Academy school.

The Gate Building – Jebal Resort, Egypt. Design of the main building of the Jebal Resort at Sokhna, Egypt. The project consists of 10 floor of residential units and duplex units with total built up area of almost. 24,000 SQ.m.

Dabash LEED Certified Office Building, Egypt. Design of an iconic office building located in 5th district, Cairo with total built up area of almost 4,000 m². The building is a certified LEED building

Al Morshedy Mall, Egypt. Design of Mall with total built-up area of almost 50,000 square meters of shops, coffees and anchor stores, etc.

Strip Mall, Riyadh, Saudi Arabia. Design of Mall located on a plot of land that totals 15,240 square meters and has a total built-up area of almost 18,000 square meters of shops, hotel, hypermarket, etc.,

Motoon Residential Compound, Riyadh, Saudi Arabia. Design of residential Compound located on a plot of foot print area of 7,420 m² and has a total built-up area of almost 8,500 square meters in addition to the open & landscape areas

SAMA Hospital, Alexandria, Egypt. Design of hospital building includes 100 beds and 9 operation rooms with total built up area of almost 12,000 m².

Faculty of Oral & Dental Medicine, Nahda University, Egypt. Design of 5 storey faculty building with total built up area of almost 8,000 m².

B. Fit Out Projects

Microsoft R & D Office Zamalek, Egypt. Design of one of the operation offices for "Microsoft R&D" in Egypt. The office floor foot print area is 1,300 square meter.

Microsoft Sales Office Smart Village, Egypt. Design of one of the sales offices for "Microsoft" in Egypt. The office consisting of two floors with total foot print area of 1,700 square meter.

Oracle Office, Egypt. Design of one of the operation offices for "ORACLE" in Egypt. The office floor foot print area is 1,200 square meter.

Nestle Office, Egypt. Design of the main office for "Nestle Water" in Egypt. The project consist of upper & lower floors with total built up area of 3,000 square meter.

CISCO Office, Egypt. Design of the main office for "CISCO" in Egypt. The office floor foot print area is 900 square meter.

Bupa Office, Egypt. Design of main office for "Bupa" in Egypt located in Mivida Complex. The office consisting of two floors with total foot print area of 2,300 square meter.

Thomson Reuters Office, Egypt. Design of the main office for "Thomson Reuters" in Egypt. The office floor foot print area is 800 square meter.

Toscana Restaurants, Egypt. Design of the chain of restaurant for new Italian brand "Toscana" in Porto Cairo and Porto Alsokhna.

CIC-CIB Office, Egypt. Design of one of the operation offices for "CI Capital" in Egypt. The office floor foot print area is 1,800 square.

C. Infrastructure Projects

King Abdullah Suburb in Jizan, Saudi Arabia. Design of the infrastructure networks for the new district with total site area is approximately 85 square km.

TEDA 6KM2 Expansion Area of SE Zone, Egypt. Design of the infrastructure networks for development of 6KM2 Expansion Area of China-Egypt Suez Economy and Trade Cooperation Zone located in Alain Alsokhna. The project consisting of 460 Hectare of Industrial zones and 75 Hectare of the residential and living zones in addition to the road network and landscape areas.

Perlita Gardnes, Doha, Qatar. Design of the infrastructure networks for a residential compound located on the Pearl Island, Qatar with a total site area of approximately 250,000 m². It consist of villas, townhouses, and five story residential buildings with associated facilities.

JEBAL AI-Sokhnah Resort, Egypt. Design of the infrastructure networks for resort located in Alain Alsokhna, Egypt with a total foot print area of 300,000 square meters approximately. The expected land use will be for Residential Units (villas & apartments), 5 star Hotel, Entertainment areas, Commercial areas, Health Club, Aquarium Restaurant, Playgrounds, in addition to the Green & Open space Areas.

EMAAR New Affordable Housing Project, Saudi Arabia. Design of the infrastructure networks for the King Abdullah Economic City. The total site area is approximately 250,000 square meters of affordable housing buildings and associated activities.

BOSLA (SME's) Project, Egypt. Design of the infrastructure networks for a development for 57,000 sq. m industrial plot located within the Polaris Al Zamel Industrial Park, 6th October City, Egypt and dedicated for small & medium enterprises (SMEs).

Hydra Village, Abu Dhabi, UAE. Design of the infrastructure networks for residential compound. The project is approximately 1,000,000 square meters of multi-activities comprise of 2,300 town houses, two kindergartens, two elementary schools, one club house, seven local commercial centers, one central mosque, six local mosques and one municipality complex.

D. Industrial Projects

Fadhili Prefab. Substation, Aramco-KSA. Design of the project is a prefabricated substation for Fadhili Project with Aramco, Saudi Arabia.

Zohr Field Substations Shelters, Egypt. Design of Zohr Onshore prefabrication of eight E-House shelters that accommodates electrical and instrumentation equipment.

Shell Lubrication Oil Plant, Egypt. Design of Shell Lubrication oil plant is situated in 6th October Industrial Zone. Its plant in Egypt is dedicated for production and packing of vehicles lubrication oils.

Kirkuk Cement Factory Power Station– Kirkuk, Iraq. Design of the Electrical Power Station for Kirkuk Cement Factory in Iraq.

E. Design Review & Value Engineering Projects

Abraj Quartier , Pearl Island Development, Doha, Qatar

- Design Consultant: KEO, Qatar.
- Scope: Electromechanical.

Marasi El-Bahrain, Manamh, Bahrain

- Design Consultant: Dar I-Handasah.
- Scope: Electrical.

Emaar Square, Cairo, Egypt

- Design Consultant: Dar I-Handasah.
- Scope: Electrical.

Emaar MIVIDA, Cairo, Egypt

- Design Consultant: Shaker Consultancy Group.
- Scope: Electrical.

Ayia Napa Marina, Cyprus

- Design Consultant: Georghiou & Zembylas Partners
- Scope: Electromechanical.

TEDA 6KM2 Expansion Area of China - Egypt Suez Economy and Trade Cooperation Zone, Egypt

- Design Consultant: Lead Design, USA/China.
- Scope: Electromechanical.

THAKHER City 1, Building A59 – Makkah, Saudi Arabia

- Design Consultant: Amsad Architectural Associates.
- Scope: Electrical.

Al Madinah Maternity Hospital – Almadinah, Saudi Arabia

- Design Consultant: ACE Consulting Engineers.
- Scope: Electromechanical.

Lusail Marina Mix 11 Hotel, Doha, Qatar

- Design Consultant: EHAF, Qatar.
- Scope: Electromechanical.

Mall of Egypt, Giza, Egypt

- Design Consultant: SCG, Egypt.
- Scope: Electrical.

New National Cancer Institute (500 500), Giza, Egypt

- Design Consultant: rmc, Egypt.
- Scope: Electrical.

The Gate, Cairo, Egypt

- Design Consultant: EMDEG, Egypt.
- Scope: Electrical.

Alexandria Global Hospital - Alexandria, Egypt

- Design Consultant: Engineering Consultants Group ECG, Egypt.
- Scope: Electrical.

Al Salam International Hospital, Cairo, Egypt

- Design Consultant: Allied Consultants, Egypt.
- Scope: Electrical.

Al-Futaim Cairo Festival City, New Cairo - Egypt

- Design Consultant: Engineering Consultants Group ECG, Egypt.
- Scope: Electrical.

Dubai Beach House, Dubai - UAE

- Design Consultant: Aurecon Engineering International (Pty) Ltd, Australia.
- Scope: Electrical.

TOYOTA PDC Warehouse – Jeddah - Saudi Arabia

- Design Consultant: Pivotal International, Ireland.
- Scope: Electrical.

Emaar Azzurra Village, Up Town Cairo, Egypt.

- Design Consultant: Shaker Consultancy Group, Egypt.
- Scope: Electrical.

Al-Ghadeer Hotel, Riyadh - Saudi Arabia.

- Design Consultant: MZECH, Saudi Arabiat.
- Scope: Electrical.

EFAD New Cairo Compound, New Cairo, Egypt

- Design Consultant: Crown Home, Egypt.
- Scope: Electrical.

**SAMPLE OF LANDMARK PROJECTS DIRECTED BY
MR. KHATAB DURING HIS EMPLOYMENT IN
INTERNATIONAL COMPANIES**

A. Airports

Dubai International Airport - Concourse 2 and Terminal 3, UAE. Design of a new concourse (670,000 m², 22 million passengers/year) and a new terminal (532,000 m², 10 million passengers/year) linked together and comprising all special systems in addition to various facilities such as lounges, restaurants, duty free area, and an adjacent multi-storey car-park for 2,600 vehicles.

Dubai International Airport - Terminal 2 Expansion, UAE. Design of a 95,000 m² in built-up area, 3-storey terminal building with a maximum capacity of 2,500 passengers/hour and including 60 check-in counters, 7 express counters, 9 gates for Code E aircrafts, 3,900 m² retail areas, 300 m² business class lounges, and restaurants.

Royal Airwing at Dubai International Airport, UAE. Review of and elaboration on the master plan, concept and detailed designs, preparation of tender and construction documents, for the development and relocation of the Airwing Facilities, including an airwing terminal (12,485 m²); 8 hangars (total of 69,658 m²) for the accommodation and maintenance of B747, A380 and other types of aircrafts; 250,000 m² apron, including, fuel hydrants, 400 Hz service pits, and lighting, fire-fighting and drainage systems; mini terminal/gatehouse (3,505 m²) for VIP service; Ground Service Equipment (GSE) support building (2,740 m²); a mosque (184 m²); a central plant (3,532 m²); and an antenna farm

New Doha International Airport - Ancillary Buildings, Qatar. Design of maintenance offices and workshops (3,500 m²), cargo buildings (12,000 m²), cargo agents building (2,500 m²), airline engineers offices (2,500 m²), main and satellite fire stations (2,500 m²), motor transport workshops (1,500 m²), 2 mosques (500 m²)

Doha International Airport (Site A), Qatar. Complete design of the medium- and low-voltage electrical installations and distribution networks for the new terminal (45,000 m²) and 7 ancillary buildings (15,000 m²) with a total power of 16 MVA (15 indoor 11/0.415 kV and 11/3.3 kV transformers), including stand-by power plant (3 MVA), fire detection, alarm system and master clock system. Works also included upgrading of the lighting system for the runways and taxiways, renovating of all electrical utilities and upgrading of the aviation system.

New Doha International Airport (Site B), Qatar. Expansion and upgrading of the existing airport to international world class of 6 million passengers/year capacity with assessment of impact on the city road network. Major components: passenger and cargo terminals and aprons, runways, taxiways (with addressable lighting), control

tower, helicopter apron and taxiway, hotel, ancillary buildings, tunnel (300 m) under existing runway, airport car-park, external roads (10 km of dual 3-lane highway, 800 m tunnel and trumpet interchange), and comprehensive infrastructure services.

Air-Cargo Complex, King Fahd Airport in Dhahran, Saudi Arabia. Design and construction documents for a 2-storey, pre-engineered steel structure complex of a total built-up area of 37,780 m² on a site area of 234,437 m², inclusive of all infrastructure utilities, as part of King Fahd International Airport in Dhahran.

Sharjah Airport Terminal, UAE. Design of the renovation and expansion of the Terminal Building at Sharjah Airport. The expansion includes both the Arrivals and the Departures areas and the addition of one new air bridge.

B. Mixed use Complexes

King Abdul Aziz Endowment, Saudi Arabia. Design of development consists of a large podium topped by seven towers of various heights. The tallest tower with over 100 floors - a 2,000-room, 5-star hotel- is located on the southern side facing the Haram. Podium includes commercial retail center; Restaurants and food courts; prayer areas for 3, 8000 people and a public plaza Six towers, ranging from 33 to 48 residential floors, are Spread along the periphery of the site to maximize direct view to the Haram from each of the podiums.

High-Rise Hospitality and Residential Complex, Egypt. Management of complex with total built-up area that measures 197,227 square metres and is located on a plot of land that totals 9,360 square metres. The scope of work includes the construction of an L-shaped south tower for St. Regis Hotel comprised of 226 standard rooms, 60 hotel suites, 98 serviced apartments, 16 luxury serviced apartments, and a north tower comprised of 102 luxury hotel serviced apartments, and a penthouse. All of these elements are situated on a prominent piece of land that incorporates the hotel's front and back of house, lobbies, offices and support service areas - including an underground parking garage.

Al Raha Gardens, Abu Dhabi, UAE. Design of a mixed - use residential, commercial, leisure and retail development in Abu Dhabi, UAE. The site extends over 3km. The project consists of 750 residences including villas, town houses and community services, including three schools, a medical center, retail, restaurants, supermarkets, offices, and convention and exhibition space. There will also be a medium-sized hotel and leisure complex, an equestrian center, and a sports field for polo and other field sports.

The Palm Jumeirah - Village Centre, UAE. Design of a Village Centre project located in the Palm Jumeirah Development and composed of two main zones: the Marina Apartment Complex, including six 13-storey luxury residential towers, 2-level townhouses overlooking the sea, and 3 lower levels for parking spaces and swimming pools; and the Village Centre Retail and Apartment Complex, including 14-storey high quality Village Centre Residential building, 3 lower levels for parking spaces, and the Village Centre Retail Zone with a themed Mediterranean retail village and a 6-star retail mall.

Ibn Battuta Complex at Gardens Mall, UAE. Design of a mixed-use development adjacent to Ibn Battuta Mall in Dubai on two lots. The complex includes an office building (64,500 m²) with 3 basements, a ground floor and 8 typical floors; and an hotel (upper 4-star class) and furnished apartments building with 2 basements, ground and mezzanine floors, and 7 typical floors comprising 246 rooms (311 keys) for the hotel and 118 high quality furnished apartments.

Oceana Development, Dubai, UAE. Design of the residential and tourist development of the Oceana Development with a total built-up area of 240,000 m² located on a site area of 40,000 m², the project included Shoreline Apartment Buildings with a total of 640 residential units comprising one, two, and three bedroom apartments, penthouses, garden apartments, duplex villas located at the base of every apartment building, basement parking as well as landscaping and irrigation services Hotel and Serviced Furnished Apartments, including a 300-key 5-star hotel with all guest facilities, 130 furnished apartments of different sizes, underground secured parking, indoor suspended swimming pool at top level in addition to all landscaping, irrigation, road and infrastructure services, A Health Club, including club house, swimming pool and indoor sports facilities for both.

San Stefano Complex, Egypt. Structural and electromechanical design for a multi-purpose complex consisting of a 30-floor high-rise building, with a total built-up area of 445,000 m² on a 28,000 m² site. The complex comprises the 5-star, 125-key Four Seasons Hotel, 900 luxurious apartments (222,460 m²), retail shopping mall (26,560 m²), commercial offices (9,840 m²), 10-screen cinema (4,440 m²), and parking/service area (76,235 m²) over 3 basement levels.

Madinah Haram Shopping Centre, Saudi Arabia. Design of a commercial complex, consisting of 12 blocks, 4 storeys each of a total built-up area of 85,000 m².

C. Residential Towers

Qatar Airways Crew Accommodation, Qatar. Design of 4 buildings and the sunken central recreational facilities. The buildings include 530 furnished apartments with total area of about 87500sqm.

Palm Jabal Ali, UAE. Design of 29 prototype villas with three deferent styles (Arabic, Mediterranean & contemporary) around 1730 villas will be distributed within the fronds of the manmade palm island.

Cultural Village, Qatar. Design of a residential resort consisting of 234 villas each with different theme including public open spaces, which connects all areas and activities within the site. The scope of work is the preparation of the Concept design and Documentation for 34 villas each of a different theme.

Al Ryyan Tower, Qatar. Design of the 30 storey residential tower comprised of 147 luxurious furnished apartments consisted of two basements, ground, mezzanine, 30 residential floors and health spa and swimming pool at 34th floor with total built up area of 40,000m².

Beirhaa Tower, Qatar. Design of the 34 story Residential Tower consisted of 3 basement floors, Ground floor, 3 podium floors and 31 Tower floors including 24 residential floors, panoramic restaurant & café, Health club, swimming pools and gymnasium facilities, multipurpose hall with total built up area of 47.000m².

Platinum Tower, Qatar. Design of 45-storey tower with continual twisting façade. The rotor shaped plan form of the tower has been conceptualized such that it is larger in floor area at the top floors than its base. The total built-up area is 55,552 square meters and with multi-storey car park covering a total of 20,328 square meters area holds 844 car parking lots.

Residential Compound at Rayyan Area, Qatar. Design of residential compound comprised of 2 types' 50 villas and 2 types' 8 apartment blocks, in addition to a club house, swimming pools and tennis courts (plot area 40,000 m², total built up area 30,000 m²).

Jumeirah Park - Villas and Infrastructure, UAE. Design of the residential development at the Jumeirah Park with a surface area of 400 ha for 2,764 villas of 2 storeys each and a prospective population of 25,000.

Rawdah State Mallis, Bahrain. Design of the main headquarters complex, including service facilities, pavilions, landscaped courts, terraces and gardens, of a total built-up area of 15,000 m².

D. Universities

United Arab Emirates University, Al-Ain, UAE. Design of new university campus with total built-up area of almost 300,000sq m across 350ha and accommodate up to 18,000 students. Project comprises the design of 46 new buildings, including 10 five-storey female residences, three female and three male sports and village buildings, six female and four male academic buildings, 6 four-storey shared laboratories and a six-storey administrative building in the shape of a crescent.

Dubai Higher College of Technology for Women, United Arab Emirates. Design of educational, administrative and sports and athletic facilities, parking lots, and related amenities including complete infrastructure to cater for a student enrolment of 4,670 on a 34 ha site. Works included laboratories for health sciences, pharmacy, life sciences, photography, radio and TV.

Dubai Higher College of Technology for Men, United Arab Emirates. Design of educational, administrative and sports facilities, parking lots, and related amenities for a 40 ha campus to cater for a student enrolment of 4,000 and 450 staff. Works comprised 53 laboratories, 6 training workshops for aviation, electronics, civil & mechanical engineering, photography, radio & TV.

E. Office Buildings

Arab Banking Corporation Headquarters, Jordan. Design of a basement and a 5-storey superstructure of 8,000 m² built-up to house the offices and main bank branch with a 2-level parking structure for 50 cars on an adjoining site.

Pyramids Heights Office Park, Egypt. Design for an office park on a site area of 70 ha, with a total office built-up area of 118,000 m². The design of the 18 office buildings integrates several prototype designs for 4-level buildings.

Nile Gateway II Office Building, Egypt. Design for a 10-floor, 108,000 m² office building including supporting facilities such as upper scale restaurant, health club, food court, 3-level underground car-parking for 500 cars, landscaping and outdoor piazza.

Qatar National Library Project, Qatar. Design of a 53,000 m² building to house in addition to library facilities, museums, exhibition spaces, galleries and a planetarium. The development is a 120 m high, double-cantilevered steel structure supported by 3 cylindrical cores of 18 m diameter each.

Housing Bank Headquarters and Main Branch, Jordan. Design of the bank's headquarters and main branch of a built-up area of 41,000 m² including 8 storeys and 4 basements, parking areas, auditorium and drive-in bank.

F. Hotels

Extension to Le Méridien Hotel, Amman, Jordan. Design of an extension tower for 132 guestrooms (107 rooms and 25 suites) with a built-up area of 30,000 m² and consisting of a main ballroom (1,150 m²), meeting room and pre-function area (1,800 m²), fitness centre (1,300 m²), garden terrace (2,500 m²), 3 parking floors for 250 cars, new entrance, microbrewery and a business centre.

Heliopolis Sheraton Hotel Rehabilitation, Egypt. Design of the comprehensive rehabilitation and upgrading of the fire-damaged 5-star hotel (600 rooms, 5 VIP and 1 royal suites), of 30,000 m² in built-up area, including fire-fighting systems, central air-conditioning, and all low-current and special systems.

G. Hospitals

Al Wakrah Hospital, Doha, Qatar. Design of 250-bed hospital including all Hospital services, Nurses Hostel and Multi-storey Car Park with total built up area of 122,000sqm.

Air Force Medical Centre, New Cairo, Egypt. Design of hospital comprises 250 beds, 4 specialized intensive care departments, 11 main operating theatres, emergency departments, a day surgery, an 8,000 m² outpatient department with 80 clinics and treatment units as well as a specialized center for aviation and space medicine with a site area of 6 ha and a total built-up area of 50,600 m².

King Abdel Aziz Hospital Complex in Al-Hasa, Saudi Arabia. Design and workshop drawings for a Hospital Complex comprising a hospital of 250 beds, common utilities, mosque, recreation centre, supermarket, nursery and fire station in addition to the family and staff quarters

H. Industrial and Infrastructure

Dushanbe City Electricity Network Rehabilitation, Tajikistan. Site survey and assessment of the existing conditions / installations in addition to the design of the rehabilitation works for the electricity network in order to improve the supply reliability and reduce the network distribution losses. Project components comprise four 110 kV substations with a total capacity of 230 MVA and including 200 MV/LV transformer substations, 1,200 km of MV/LV overhead lines and underground cables.

Burj Dubai DCP2, Dubai, UAE. Design of 30,000 TR District Cooling Plant comprises Water Cooled Chillers, cooling towers, primary and secondary pumps to provide chilled water distributed through chilled water network to serve residential buildings & hotels in Emaar Old Town development.

Burj Dubai DCP2, Dubai, UAE. Design of 60,000 TR District Cooling Plant comprises Water Cooled Chillers, cooling towers, primary and secondary pumps to provide chilled water distributed through chilled water network to serve residential & commercial buildings within Emaar Burj Dubai development.

Water Supply and Treatment in Riyadh, Saudi Arabia. Design of a water supply and treatment system fed from a wellfield with a high salinity content. Project components: a reverse osmosis water treatment plant (design capacity of 50,000 m³/day of product water), monitoring and control system, a 60 km/700 mm transmission line with flow and pressure monitoring devices, ground reservoirs (with re-chlorination facilities), pumping stations at the 4 main sites of the project, 2 filling stations (30,000 m³/day and 20,000 m³/day respectively), auxiliary buildings, etc.

Water Supply for the South East of Luanda - Phase 2, Angola. Design review for the second phase which covers the duplication of the existing pressure line (1,200 mm) including extension of Kassaque water pumping station (from 2 m³/s in phase 1 to 4.6 m³/s in phase 2), expansion of an additional 1.5 m³/s of the capacity of the water treatment plant at Palanca (0.5 m³/s in phase 1), addition of another 1,000 mm transmission pipeline from the treatment plant to the Palanca distribution centre, and construction of two new 10,000 m³ storage reservoirs at Palanca distribution centre, together with expansion of the associated networks.

Dukhan Housing Project, Qatar. Design of a 17 ha site accommodating 108 apartment buildings and 367 villas including infrastructure and recreational facilities.

Electromechanical Works for Muna Tents, Saudi Arabia. Design of infrastructure and desert cooling/fire protection systems, serving 14,000 tents for the accommodation of 500,000 pilgrims. Works comprised 16,000 desert coolers and a fire protection system, including 224,000 sprinkler heads and 980 fire-hose reels

Astana Master Plan, Kazakhstan. Study for the development and expansion of the new capital city Astana to meet a target population of 600,000 by the year 2030. Duties involved analysis of the existing power demand, and the existing 110 kV transmission network and associated substations as well as projection of the demand for the target population and development of the required transmission network upgrading and reinforcement measures associated with the new forecast (350 MW).

Water Supply to South East of Luanda, Angola. Design review for a new water treatment plant at Palanca as well as for the rehabilitation and upgrading of the water supply system, including extension of Kassaque water pumping station (1st phase 2.0 m³/s and 2nd phase 4.6 m³/s), construction of a water treatment plant in 2 phases at Kikuxi with a total capacity of 500 l/s, and rehabilitation and extension of the existing pumping station at Palanca distribution centre

Oil Services Centre, Engineering Works, Angola. Design of the comprehensive infrastructure works at the Sonils Oil Service Centre, consisting of a diesel power generation plant, electrical and communication distribution networks, storage and distribution network for diesel oil, water storage and distribution, area and street lighting installations, roads and a stormwater drainage network.

Sana'a Water and Wastewater, Yemen. Design of water supply, wastewater collection and disposal works for a population of 2.8 million by 2020. . The project aims to increase the water supply by 60,000 m³/day and the wastewater collection and treatment by 115,000 m³/day.

Oran Water Supply, Treatment and Transmission, Algeria. Master plan, design, construction documents and environmental impact assessment for a domestic water supply system with peak and average flow rates of 174,000 m³/day and 92,000 m³/day respectively, including a main transmission pipeline (151 km of 850 to 1,200 mm), pre-treatment facilities, extension and rehabilitation of water treatment plant, 2 pumping stations (0.9 - 1.7 m³/s), 2 booster stations of 6,200 m³/h at about 100 m head, 3 break-pressure structures, and 3 storage reservoirs (1,500 - 5,000 m³).

Gabal El-Asfar Wastewater Treatment Plant, Egypt. preparation of construction drawings for electrical equipment arrangement, bus bar trunking details, and lighting system and power distribution network.

Electrical Substations, Egypt. Preparation of construction drawings for the switchgear arrangement, transformers, control, protection and auxiliary systems. High-Voltage substations in El-Omayed (220/66/22 kV), Qena (220/132/66 kV), Marsa Matrouh (220/66 kV) and Safaga (220/66/22 kV).

I. Defence and Security

Renovation of An'numaniyah military base, Baghdad, Iraq. Site survey and assessment of the existing conditions / installations in addition to the design of the comprehensive rehabilitation work including recommendations required to finish the construction works & enable operation of the buildings.

Special Forces Facility, Kuwait City, Kuwait. Design of special military facilities with a total built-up area of 268,000 m² on a site area of 630 ha, including buildings, infrastructure and special military facilities, serving 6,000 residents and over 600 administrative staff.