STRUCTURAL STEEL FABRICATION

WWW.CERM-EX.COM







Operating on an international scale, CERM-EX is widely recognized for its iconic structures, engineering excellence and unparalleled customer service. Our vision is to achieve sustainable growth, while safeguarding our carefully-built reputation as the market leader in structural steel. By upholding our high standards of professionalism and quality, being customer-focused at all times and taking care of our staff, we can fulfill this vision.

www.cerm-ex.com

STRUCTURAL STEEL FABRICATION

CERM-EX provides comprehensive structural steel and plate fabrication services. From our early beginnings as a sheet metal fabricator, grew the largest segment of our business model, we can handle any shape or size. This is one of our core specialties and uniquely qualifies and equips us to handle any job, large or small.

Read more at: www.cerm-ex.com

STRUCTURAL DESIGN AND DETAILING

Our high-rise specialists understand that the success of tall building design depends on the relationship between the structure and services. We therefore combine advanced analytical tools with a complete palette of high-rise technical expertise to design building cores that create maximum value and solve our clients' biggest challenges.

STEEL FABRICATION AND PRODUCTION

CERM-EX has been providing a full range of steel fabrication services for our clients which includes Top International Contractors and Process Manufacturers. With the help of our comprehensive machinery, experienced technical team and quality system our fabrication process becomes defect-free.

STRUCTURAL STEEL ERECTION

Delivering a successful steel erection service is entirely dependent on the team of technicians behind the task. At CERM-EX we have a refined selection of experienced individuals who come together as a cohesive team to ensure your steel erection project is being handled in a professional and safe manner at all times.

PROJECT MANAGEMENT

Project management is one of the most fundamental aspects of any project. Strong leadership and clearly communicated objectives provide the foundation for a successful project. This includes a vision for delivering the expected results in the pre-determined timeline with precisely calculated execution.

STRUCTURAL & CIVIL GENERAL CONTRACTING

CERM-EX provides Industrial and Civil general contracting services. We provide a full range of services in this area that takes the customer directly from the early design phase of their project right through to the completed project.

QUALITY ASSURANCE

The quality of work consistently produced by CERM-EX is no accident. The critical nature of the products that we manufacture demands it and if we couldn't deliver it at a competitive price, we wouldn't have the continued success that we have enjoyed.

At CERM-EX we do things a little differently. We strive to innovate, pave new ground and work smarter with our fabrication and construction services. We've developed a workforce that is customer-centric. We work and build complex projects. Our goal is to streamline processes in a way that makes complex projects seem easy. That's the CERM-EX way...



STEEL FABRICATION ABOUT US

We approach every project, from the highly technical to basic structural work, with the same level of safety, professionalism, commitment, care and customer service. Operating on an international scale, CERM-EX is widely recognized for its iconic structures, engineering excellence and unparalleled customer service.

Our vision is to achieve sustainable growth, while safeguarding our carefully-built reputation as the market leader in structural steel. By upholding our high standards of professionalism and quality, being customer-focused at all times and taking care of our staff, we can fulfill this vision.

CERM-EX has seen steady growth since its inception in 1970. Our steel fabrication facilities have a combined annual capacity of around 30,000 tonnes of fabricated steelwork and our operatives are working on at least 35 major projects nationwide at any one time.

We have the design, experience and engineering skills to serve a diverse range of market sectors, from education and hospitals to bridges and commercial offices. STEEL FABRICATION

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Shop Advantage and Capabilities

Knowledgeable shop operations teams, including in-house inspectors ensure unparalleled welding quality pertaining to many common and uncommon structural steel alloys. Products are inspected by full time quality control inspectors and procedures are assured by certified welding inspector (CWI). Our project managers work with each customer to streamline the fabrication of their products through our manufacturing facility.

CERM-EX structural steel shops are equipped with the most modern state of the art welding equipment on the market, enabling us to provide very competitive pricing for our customers. Welding processes of GTAW commonly known as tig welding, GMAW-Short Arc and PULSE known as mig welding, SMAW referred to as shielded metal arc welding or stick rod, FCAW is known also as flux core welding, SAW is submerged arc welding, are all used in our facilities for broad application, diversity and fabrication efficiency.

And because we employ two shifts in our fabrication facilities, we can expedite and deliver your project efficiently helping to meet your deadlines. This includes tackling tough time sensitive shut-down work in which we excel in, when timing and deadlines are especially critical. While you have a project in our shop, it becomes your shop, with knowledgeable people, state-of-the-art equipment and facilities, and a friendly and cooperative attitude.

From project management through fabrication, welding, painting, assembly, testing and shipping, you get the services you need to produce your product. We want to become long-term partners. You can count on CERM-EX for the best people working in the safest and most efficient way to deliver the highest level of quality and dependability – all of which translate to added customer value.





STEEL FABRICATION

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Diversified Core Products, Manufacturing Capabilities, Services List

- Light, Medium, and Heavy Structural Fabrication
- Plate Steel Fabrication
- Miscellaneous Steel
- Custom Fabrications
- Land Rig Packages
- Masts / Substructures
- Offshore Structures
- Equipment Skid Assemblies
- Skidded Packages
- Production Module Packages
- Modular Fabrication
- Process Equipment Skids
- Oilfield Components (Onshore and Offshore) High Pressure Piping
- Offshore Cranes, Derricks, Platforms
- Draw Works Frames
- Offshore Riser Handling Systems
- Industrial Structural Rolled Cones
- Formed Cones Transitions: Square to Square, Square to Round, Round to Round

- Derrick Legs, V-Door Ramp
- Box-On-Box Substructure
- Riser Cart, Crane Booms
- Platform Base for Crane Pedestal
- Watertight Doors
- Round Duct, Flat Panel Duct, Hoppers
- Walkway Access, Handrail, Ladders, Stairs
- Steel Joists, Decking
- Joist, Joist Girders, Bridging
- Roof Deck, Floor Deck
- Heavy Duty Application
- Painting/Coating System Application
- Comprehensive General Contracting
- Contract Manufacturing
- Project Management
- Design-Build Projects
- Field Services
- Rig-Up Services
- Commissioning / Testing



STEEL FABRICATION PRODUCTS AND SERVICES

Through 50 years of cultivated experience, our world-class manufacturing workforce and machinery have allowed us to serve a growing list of clients in various sectors.





General Steel Structures

Since its inception, CERM-EX has been a pioneer of structural steel works, whether fundamental or highly engineered, maximising the potential of steel construction and leveraging our unique experience in the market.

Our clients range from private individuals and companies in different sectors to governmental institutions.

- Industrial plants and factories
- Warehouses, mezzanines and hangars
- Fire escape stairs
- Walls and buildings' consolidation structures - Electrical and communication towers
- Special shaped steel poles (circular, hexagonal, octagonal)
- Steel substructure supporting PV panels

Architectural Structures

CERM-EX distinguishes itself from its competitors by its unique expertise, technological resources and partnerships, to shape the most iconic projects with highly complex steel and composite building skins.

We have been serving several high-profile clients from various industries, including shopping centers, hotels, sports courts and facilities, private villas, car parks, etc...

Steel structures

- Steel bridges
- Steel façade
- Entrance canopies
- Panoramic lifts

Glazed structures composed of steel and glass

- Glazed bridges
 Glazed skylights of different shapes (pyramidal, domed, barrel)
- Glazed facades
- Glazed entrance canopies

Tensile membrane structures composed of steel and the highest quality skin covers

- Shade fabric membrane canopies
- Architectural umbrellas
- Tailor made roof covers

Special Industrial Infrastructure

Since its inception, CERM-EX has been a leader in the supply, installation, refurbishment, and maintenance of industrial infrastructure for special uses in different industries.

We have successfully developed solutions for a wide scope of industrial clients, mainly food processing factories, chemical factories, water treatment facilities, and oil and gas facilities and cement factories.

- Overhead cranes
- Screw and belt type conveyor systems
- Industrial chimneys made of corten and special steel open-top waste-water tanks, etc...) and silos with associated piping
- Heavy fuel and oil tanks with associated piping, pump houses, fire fighting
- Sea lines for tanks with associated off-loading connections systems
- Steam boilers with associated heat exchangers
- and dryers
- Distillers and crystallizers





PRODUCTS AND SERVICES

We provide our customers with technical and manufacturing expertise for long-term turnkey solutions, and extend our services to every stage of a project.

We address thermal and seismic requirements, exceeding expectations for performance, life cycle and safety, and always complying with international standards.



Structural Composite Concrete Elements

Composite structures are key to the new building industry. By combining the advantages of steel and concrete, CERM-EX is able to solve many design, architectural, economical, and functionality problems that can arise in complex projects. We ensure faster construction of stronger, lighter, and more compact buildings.

CERM-EX has served various clients with these innovative practices on different types of projects such as mega-factories, universities, and hi-rise commercial buildings.

Concrete Filled steel Tubes (CFT):

In this system, the steel serves as a permanent formwork for the concrete column and slabs are also made of steel to reinforce the connection between members. This leads to a stronger and more advantageous system when compared to regular reinforced concrete structures.

Encased Composite Concrete (ECC):

In this system, the steel sections are encased in concrete columns. This system provides excellent seismic and wind load performances as well as better fire protection plans than regular structures.

High-End Decorative Metal Works

Along with our partners, our expertise has allowed us to prosper in quality metal products; focusing on sophisticated interior decorative steel works with complex designs and high end finishes.

Applications are various and our clients range from residential private villas to commercial shopping malls and restaurants.

- Stainless steel decorative works
- Copper and brass handrails for balustrades
- Internal and helicoid stairs
- Glazed mezzanines for villas





STEEL FABRICATION QUALITY ASSURANCE

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- Non-Destructive Testing and documentation including Visual Testing (VT), Magnetic Particle Testing (MT), Dye Penetrant Testing (PT), Ultrasonic Testing (UT), and Radiographic Testing (RT).

- Dimensional verification and documentation up to and including 100% per customer specification.

- Material testing and chemical composition documentation and tracking per customer specification.

- Customer-supplied Production Part Approval Process (PPAP) verification and documentation.

- Welding Procedure Qualification Record (WPQR) documentation and selection as appropriate per requirement.

- In process (hold points) and final inspections as required by customer specifications.

We are also extremely qualified and experienced at appropriate procedure selection and confirmation for varying materials, Complete Joint Penetration (CJP) welds, Partial Joint Penetration (PJP) welds, bevel welds, fillet welds, plug welds, among many others.

Quality Certificates

ISO 9001:2008 Quality management systems Certification

OHSAS 18001:2007 Occupational Health and Safety Management Certification

ISO 14001:2004 Environmental management systems

TS EN ISO 3834-2 Quality Requirement for Fusion Welding of Metallic Materials

Other features which assure quality are:

- CERM-EX' main plant is climate-controlled and air conditioned for employee comfort and production accuracy.

 Purchased material traceability and control -Incoming raw material is certified and traced back to composition at the mill in order to comply with customer specifications.

 Bar-coding throughout the entire manufacturing process - Accurate tracking of material as it flows through the various work centers assures that the proper material is used for every application.

 Autodesk Advance Steel and Tekla Structures are the programs utilized by our programming group for electronic file transfer of your prints. This use facilitates accurate information, helps with the nesting or programming of your component, and confirms that component parts will fit up properly for final weld.

- Just as there is nothing small about what we do, there is nothing standard about our software - Our process is guided by a specialized Enterprise Resource Planning (ERP) application, and we have a fully functional, archival electronic document management system to assure proper history is always readily available.





STEEL FABRICATION

SHEET METAL FABRICATION

CERM-EX offers Sheet Metal Design, Fabrication, Manufacturing, Construction, Assembly and Field Installation. We

provide comprehensive Metal Working Solutions for all your custom sheet metal fabrication needs.



CERM-EX offers Sheet Metal Design, Fabrication, Manufacturing, Construction, Assembly and Field Installation. We provide comprehensive Metal Working Solutions for all your custom sheet metal fabrication needs. Our integrated metal processing operation combined with our progressive continuous improvement approach will assist in fulfilling your sheet metal fabrications in a timely and cost effective process. We specialize in carbon steel, stainless, aluminium, and many other common alloy material fabrications.

We produce a wide variety of custom fabricated products including stacks, tanks, ductwork, hoppers, chutes, flumes, boiler casing, air scrubber systems, control panels, drillers consoles, coupling guards, rotating equipment guards, handrails, platforms, drip pans, enclosures, weldments, tower trays, and much more custom sheet metal fabrications to suit your requirements.

We also offer state of the art material processing and indoor painting facilities to help expedite your project in a cost efficient manner. Whether your needs are as simple as shearing or forming, or you have a complex project, we have the expertise to meet your needs

Metal Fabrication, Custom & Production Manufactured Products of all Types

In CERM-EX sheet metal fabrication shop, your rough, preliminary or finished drawings are turned into quality products, efficiently and economically using lean manufacturing methods. We manufacture every item, custom or production to meet our customer's exact specifications and tolerances fulfilling our commitment to quality for the end user.

If it can be designed and drawn, if it can be made of metal or metal plate, then CERM-EX can make your drawings a reality. We work with carbon steel, alloy steel, stainless steel, and aluminum sheet metal. Typical products we fabricate from these materials are metal cones, fabricated metal elbows, transitions, cyclones, tanks, compressor skids, industrial belt guards, metal cylinders, coupling guards, troughs, motor base, blower housings, strainer baskets.





REFERENCES

ISTANBUL ÇAMLICA TV AND RADIO TOWER

Project Management and Steel Assembly Contract

CUSTOMER

UAB Infrastructure General Directorate of Investments

LOCATION Istanbul, Turkey

ARCHITECT Melike Altınışık Architecture

Structural Engineer Balkar Engineering

PERIOD May, 2016 - November, 2019

SERVICES PROVIDED CERM-EX Inc has been responsible for the steel assembly of the Tower.

CONSTRUCTION AREA 10,000 m2

TONNAGE CAPACITY 7000 Ton Designed by Architect Melike Altınışık for the contest of "Çamlıca TV and Antenna Tower Project" planned to be implemented in 2011, the structure presently rises along 369-meter height on the Küçük Çamlıca Hill, one Istanbul's highest spots. The tower is constructed at 218-meter elevation from the sea level, situated on a 10,000 m2 project site and 2,400 m2 net construction area.

Its total height reaches 369 meters, 203.5 meters being reinforced concrete structure and 165 meters being the transition area of the steel antenna height, peaking at 587-meter from the sea level. That is to say, it will be beyond being a TV-Radio tower and it will rather act as a futuristic artwork that brings together tens of towers dispersed along both groves and that will, once complete, contribute to the silhouette of Istanbul. It will blow a new breath to the tourism and social life of Istanbul with its viewing floors at the 148th and 153rd meters and its restaurants at the 175th and 180th meters.

The outer facade consists of 7 segments, each segment contains 3 floors. The segments were assembled on ground level, lifted one by one to 200m top level and connected by welding.

The antenna consists of 14 segments, constructed and connected to each other by welding within the concrete structure of the tower. After completion of construction, the 165m long antenna was attached at ground level and lifted from ground to 200m height. Fastening the antenna at ground level entailed that the centre of gravity remained well above the attaching point.











Our vision is to be recognised as world-class leaders in structural steel, known for our ability to deliver any project, to the highest possible standards.



ISTANBUL SABIHA GÖKÇEN AIRPORT

Project Management, Fabrication and Assembly Contract

CUSTOMER

Limak Construction (Turkey) – GMR (Malaysia) JV

LOCATION Istanbul, Turkey

STRUCTURAL ENGINEER ARUP Engineering and Consultancy Ltd.

MAIN CONTRACTOR Temsan Inc

PERIOD May, 2008 - October, 2009

SERVICES PROVIDED

CERM-EX Inc has been responsible for steel fabrication and construction of the international terminal building roof system.

CONSTRUCTION AREA 40,000 m2

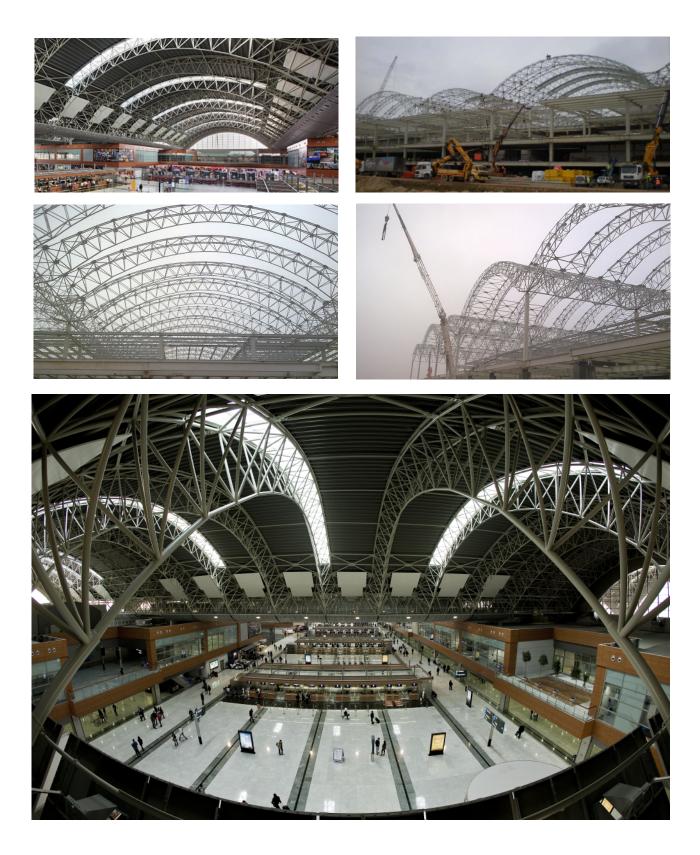
TONNAGE CAPACITY 7000 Ton Arup design for Sabiha Gokcen International Airport terminal uses 300 isolators to reduce lateral earthquake loads by 80%, enabling it to withstand an earthquake of 7.5-8.0 on the Richter scale. This makes the building, at over 40,000 m2 on plan, the largest seismically isolated structure built to date.

The bearing system of the structure consists of moment frames in both directions. Columns are composite square box and are placed in a 16mx16m grid system to form typical floor panels. The main beams that provide the frame axle in both directions are solved composites in the middle of the span, and it is aimed to save money by using plain steel in the support areas. As a result, steel sections in the support areas of the main beams were made stronger than the section in the span and S355 Steel grade were used. The reason for using fabricated sheet metal profiles is to ensure short supplying period and more economical solution by using optimum cross-section.

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The same approach has been applied for ribbed beams. Instead of using a ready-made rolling profile, the most economical section was determined for this system. All kinds of displacement, vibration and strength calculations have been made for these sections. As the determining factor in these sections is displacement and vibration, S235 steel grade has been used in line with the main contractor request. In addition to the low cost of the S235 sheet, the supplying time played a serious role in this decision.







TIMSAH ARENA STADIUM

Steel Design, Fabrication and Assembly Contract

CUSTOMER

Bursa Metropolitan Municipality

LOCATION Bursa, Turkey

PERIOD January, 2016 - June, 2018

SERVICES PROVIDED

CERM-EX Inc has been responsible for structural design, project management and construction of the roof, stairs and crocodile shape of the stadium. Sözüneri Architects designed the stadium and Gintaş Construction Inc was the main building contractor.

TONNAGE CAPACITY 7,200 Ton The concept of Bursaspor's new stadium was created in 2010, when the club reached for their historical first domestic championship. The stadium resembling a resting crocodile received global recognition for its original, yet controversial appearance. The outer shell consists of green glass and membrane partly overlapping the glass.

Primarily, from the outside, it was designed to resemble a resting crocodile. The idea might seem strange as there are no crocodiles living in Bursa, but the team Bursaspor is nicknamed Crocodiles, thus the identity.

Green membranes (white PTFE, green PTFE and painted green PVC mesh, in total 65,000 m2) and glass create the skin, while the northern stand is topped with a giant literal head (to be ready in 2016). It's the stadium's highest point at over 43 meters. Secondly, the stadium has a unique layout of the stands. Western main grandstand is divided into three tiers. East side has two levels, while both ends have single massive stands. South one for locals of the Teksas community and north one with a significant away section. And on top of all this a continuous ring of 72 skyboxes ranging from 10 to over 30 seats.

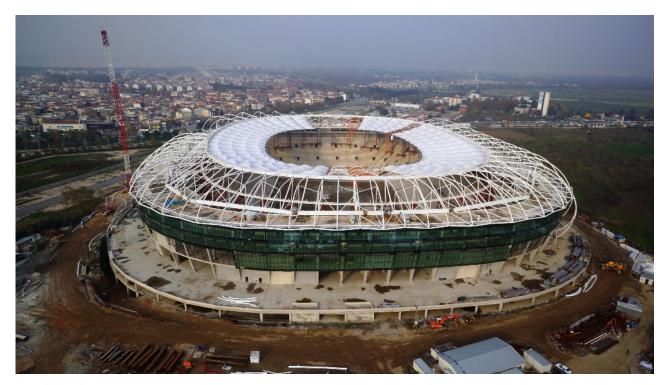
The stadium comprises a massive floor space of 190,000 square meters, including 50,000 for commercial and office use. The number also includes underground parking for over 640 cars (1,500+ with the open parking site). Fans will enjoy 35 catering points and 789 toilets. 90 gates will in turn allow for very fast evacuation of almost 44,000 people – in just 8 minutes.

> IMAGE Timsah Arena Stadium











TIRSAN KARDAN FACTORY

Steel Fabrication and Assembly Contract

CUSTOMER Tirsan Kardan A.S.

LOCATION Manisa, Turkey

PERIOD Jan, 2019 - Sep, 2019

SERVICES PROVIDED CERM-EX Inc has been responsible for the steel fabrication and assembly process of Tirsan Factory in Manisa.

TONNAGE CAPACITY 2,600 Ton

PROJECT AREA 139.000 m2 Tirsan new factory was completed in September 2019 at the industrial park in Yunusemre, Manisa, as a hub of its business operation.

CERM-EX was involved in the project from the preliminary planning stage, providing project management, structural and MEP engineering services consistently until the completion of the building. The facilitation of the project process was the most challenging task due to the tight project schedule. CERM-EX successfully addressed it by setting and managing the appropriate project sequence. The success was achieved by appropriately organising the conditions and requirements of the project, selecting the right design-build contractor through the competitive tender, establishing the rules for design and construction process, monitoring the progress in accordance with the established rules, and providing appropriate technical advices. These factors contribute not only to the efficient flow of the project sequence but also to the successful control of the construction quality and project cost, which eventually led to a high level of the client's satisfaction for our services.



IMAGE Tirsan Kardan Factory









SALT FACTORY IN TURDA, ROMANIA

Structural Design, Steel Fabrication, and Assembly Contract

CUSTOMER Sistemas Technology A.S.

LOCATION Turda, Romania

PERIOD September, 2019 - February, 2020

SERVICES PROVIDED

CERM-EX has been responsible for the structural design, steel fabrication and assembly process.

TONNAGE CAPACITY 200 Ton

LAND AREA 5,300 m2 We maintain our reputation because we invest in attracting and developing the most inventive and experienced of structural engineers. They are proficient in connecting the demands of geometry, materials and loads (gravity, wind, seismic).

Equally, we make sure that our structural engineers work closely with clients and collaborators and stay up to date with industry issues so that they can innovate in response to real-world challenges and constraints. The salt factory was designed by our team and the fabrication of the steel structural elements took place in our steel fabrication facility in Bursa. The project timeline was very challenging and to meet these time restrictions, we designed the structure using modular construction techniques to shorten the assembly process during the cold weather conditions in Turda and ensure our workers safety.



IMAGE Salt factory in Turda, Romania











ENDULUS PARK ROOF STRUCTURE

Structural Design, Steel Fabrication, and Assembly Contract

CUSTOMER

Endulus Real Estate Developer

LOCATION Bursa, Turkey

PERIOD September, 2017 - February, 2018

SERVICES PROVIDED

CERM-EX has been responsible for the steel fabrication and assembly process of the roof structure of the shopping mall.

TONNAGE CAPACITY 350 Ton

LAND AREA 22,000 m2 As cities grow, their green spaces often shrink. Yet green infrastructure plays a key role in healthy, appealing and resilient cities. Green envelopes improve air quality and reduce pollution by filtering fine particles out of the air. Not only that. They also minimise heat island effects and contribute to reduce noise levels.

Working closely with our partners, CERM-EX develops green building envelope concepts that both meet individual client goals for energy efficiency and environmental experience, but that also contribute to a more sustainable urban environment. We offer a wide range of green building envelopes moss walls, tree façades, and urban agriculture initiatives such as vertical farming, beehives and wildlife corridors, which all help to deliver better air quality.

Green roofs greatly improve water management too, enabling storm water retention with timely release to public drainage systems and making it unnecessary to build expensive infrastructural storm water facilities.











IZMIR ALSANCAK STADIUM

Structural Design, Steel Fabrication, and Assembly Contract

CUSTOMER

Izmir Metropolitan Municipality

ARCHITECT Alper Aksoy Architecture

LOCATION Izmir, Turkey

PERIOD March, 2017 - December, 2017

SERVICES PROVIDED

CERM-EX has been responsible for the steel fabrication and assembly process of Izmir Alsancak Stadium.

TONNAGE CAPACITY 250 Ton The area where the stadium is located has been used for football matches since 1910. The competition area, which was used by minorities in its early years, was transferred to İzmir Governorship after the War of Independence. In 1929, the Governorship of Izmir built the Alsancak Stadium, which consists of closed and open terraces. In 1971 the stadium was reconsidered, renovated and took its final form.

In this process, the stadium, which hosts many national and international matches, was found to be risky in terms of life safety in the earthquake resistance test conducted in 2014, and a demolition decision was made in 2015 and demolition operations were started in September 2015. In this context, the main purpose of the project was to reconsider this stadium, which has a high historical importance, as a new stadium that is environmentally friendly, complies with current regulations and uses up-to-date technology while preserving its capacity.

The stadium capacity is 15.000 spectators. The stadium terraces and the administrative building of the stadium will be covered with a single roof. The VIP stands will be placed behind the goal away from the fans terraces. The stadium will have 4 dressing rooms, 2 referee rooms, 4 coach rooms, offices, 10 lodges, press conference and working areas, protocol areas, food and beverage areas, and a multi-purpose hall for 100 people.

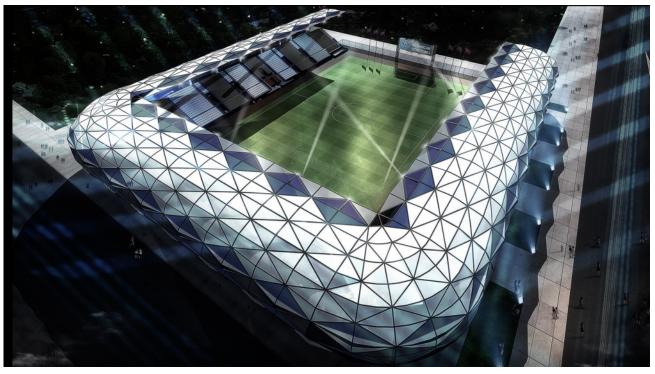
> IMAGE Izmir Alsancak Stadium













REFERENCES

BURSA CHAMBER OF COMMERCE AND INDUSTRY MOSQUE AND SCHOOL

Steel Fabrication and Assembly Contract

CUSTOMER

Bursa Chamber of Commerce and Industry

LOCATION Bursa, Turkey

PERIOD February, 2017 - August, 2017

SERVICES PROVIDED CERM-EX Inc has been responsible for the steel fabrication and assembly process of BTSO Mosque and school in Bursa.

TONNAGE CAPACITY 250 Ton

PROJECT AREA 18,000 m2

The mosque and school was design by Piray Architecture. The project is located in an area of approximately 18,000 square meters. The outer Facade of the mosque was made from Titanium zinc which is an adaptable material to the geometric patterns and shapes of the mosque. This material also adds a different atmosphere to the appearance of the mosque.

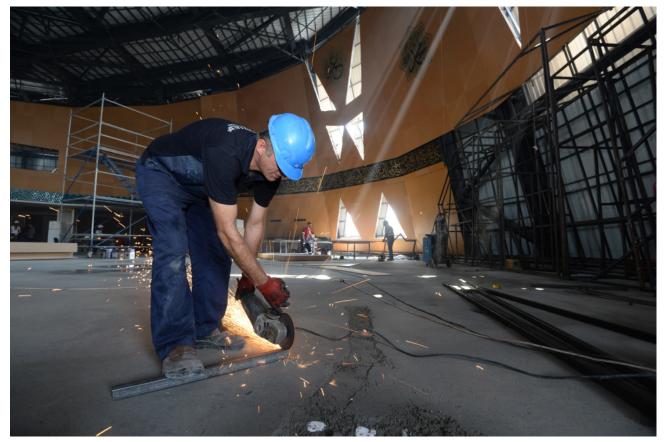
Due to the complex geometric patterns and shapes of the mosque, 70 percent of the mosque was built with steel structure. The success was achieved by appropriately organising the conditions and requirements of the project, selecting the right design-build contractor through the competitive tender, establishing the rules for design and construction process, monitoring the progress in accordance with the established rules, and providing appropriate technical advices.

> IMAGE BTSO Mosque











LEBAP CEMENT FACTORY

Steel Fabrication and Assembly Contract

CUSTOMER Turkmen Cement

LOCATION Türkmenabad, Turkmenistan

MAIN CONTRACTOR Polimeks İnşaat ve Sanayi A.Ş.

PERIOD August, 2010 - November, 2012

SERVICES PROVIDED

CERM-EX Inc has been responsible for the steel fabrication and assembly process of Lebap Cement Factory

TONNAGE CAPACITY 250 Ton

PROJECT AREA 500,000 m2

Within the scope of this project; erection of cement mill and related mechanical works (installation of the main steel structure and cladding, de-dusting ducts, chimeny, chuts and gas ducts, pipe work and insulation, bag filter, pumps, compressor and elevators) and additional raw materials silos modification and erection on site were completed.

The Lebap Cement Factory is constructed near Koytendag in the Turkmenabad region, close to the Uzbekistan-Afghanistan border. The Lebap Cement Factory has a cement production capacity of 1,000,000 tons.

The facility includes raw and auxiliary material crushing units for material arriving from quarries, circular and linear stockyards, a fully automatic weighing and dosing system, a raw material mill with an hourly capacity of 230 tons, raw material dust silo with a capacity of 10,000 tons, pre-heating and rotary kiln unit and feeding unit, clinker cooling unit, clinker silo with a storage capacity of 50,000 tons, cement mill with an hourly cement production capacity of 180 tons, four 5,000-ton cement silos compatible with the cement type and production capacity, cement bag packaging facilities, bulk silo-bus, wagon loading and unloading facility for incoming raw materials, supporting units and dedusting filter.

> IMAGE Lebap Cement Plant

















ESKIŞEHIR NEW STADIUM

Steel Fabrication and Assembly Contract

CUSTOMER

T.C. Prime Ministry Housing Development Administration

LOCATION Eskişehir, Turkey

MAIN CONTRACTOR Arsel Construction, MD Construction

PERIOD April, 2013 - November, 2016

ARCHITECT Bahadir Kul Architecture

SERVICES PROVIDED

CERM-EX Inc has been responsible for the steel fabrication and assembly process of the stadium.

TONNAGE CAPACITY 3,350Ton

PROJECT AREA 166,631 m2

New stadium for Eskişehirspor was planned in the western outskirts of the city, thus forcing football games from the centrally-located Atatürk Stadium, earmarked for new non-sporting development. The stadium's concept was created in the renowned office of Bahadir Kul, where the idea of a stadium inspired by dynamic movement of a football was created.

While looking very dynamically in renderings, the vision lost a lot of its fluency during construction. Not as gentle as the idea, the actual stadium still manages to retain originality.

Its southern façade is white and opaque, but the stadium reveals some of its interior towards the north with extensive use of glass. Between the stands and vast roof a thick red mesh was installed to add club colours during both the day and night.

Double-tiered stands were designed with 33,000 people in mind. Interestingly, skyboxes are placed on both sides of the field rather than the usual west where most of the hospitality areas are usually located. There are three restaurants at the stadium while a nearly 13,000-square-meter parking hidden beneath the stands.

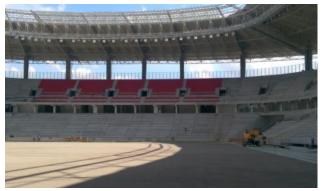
IMAGE Eskişehir New Stadium

















GAZIANTEP NEW STADIUM

Steel Fabrication and Assembly Contract

T.C. Prime Ministry Housing Development Administration

LOCATION Gaziantep, Turkey

MAIN CONTRACTOR May Inşaat, Egemen Group

PERIOD August, 2013 - December, 2016

ARCHITECT Bahadir Kul Architecture

SERVICES PROVIDED

CERM-EX Inc has been responsible for the steel fabrication and assembly process of the stadium.

TONNAGE CAPACITY 2,750 Ton

PROJECT AREA 115,000 m2 Designed in 2012, the stadium is located 10 kilometres away from the city centre. Gaziantep Stadium entered construction started in 2013, following the selection of May and Egemen Inşaat as contractors. Preparatory work began in May and actual construction supervened in late August. The new location offered over 158,000 m2 for development that includes 1,363 parking spaces.

Initially two years were expected enough for the project but this time frame proved insufficient. Structurally it almost went along the plan. One by one, each stand was raised as part of a massive monolithic structure (in this order: west, south, east and north) and by the end of 2015 all of them were even covered.

However, following installation and furnishing works lasting all of 2016, opening was only possible in January of 2017. And it was a bitter one with only a third of all seats occupied and the home side losing to Antalyaspor 0:3.

The double-tiered stands were created with roughly 36,000 people in mind, though with some room for expansion. However, this compact seating bowl is fairly standard when compared to the original approach used outside.

Utilising only simple, cheap and already well known elements, Bahadir Kul Architects managed to create an original unique design. The stadium was covered with strips of membrane and then with a geometric skeleton covered in composite panels. Coloured black and red, these represent the colours of Gaziantepspor and allow the stadium to change colours as the beholder passes by.









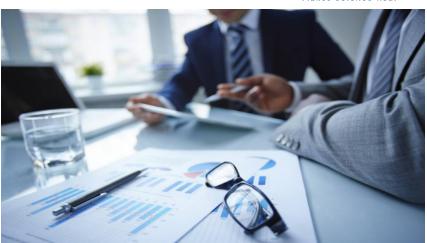




SERVICES PROJECT AND CONSTRUCTION MANAGEMENT

CERM-EX provides

qualified project and construction management expertise as an extension of the client while ensuring all client needs and regulations are efficiently met.



Project and construction management as an extension of the client

CERM-EX offers qualified project and construction management consultancy services to clients who do not have their own project management team or need to expand their team.

In the role of project manager, we act on behalf of the client to hire architects, engineers and contractors who design and construct the clients' buildings and facilities. CERM-EX manages the project in relation to quality, time and financial goals. As construction managers we can lead the entire construction work including all coordination, logistics, communication, quality and regulation all the way to inspection and hand-over.

Specialist services and covering all sectors

CERM-EX project and construction management has specialists in procurement, cost estimates and environmental certification within LEED and BREEAM. Project management is active in a variety of segments, including:

- Housing
- Infrastructure
- Commerce
- IndustryCulture
- Education
- Healthcare

Both large and small-scale projects are equally important to us.

Ensuring successful project delivery

CERM-EX believes efficient communication with owners, end-users, authorities, designers, entrepreneurs and developers is critical to a successful project. With extensive experience working with all stakeholders in a project and by combining the in-depth knowledge from CERM-EX's wide-ranging disciplines we can ensure that the project is successful not only to the client but also the end-user and other stakeholders.

Our approach is to clearly understand the client's needs and define the project goals together at an early stage. This enables us to work efficiently throughout the project whilst giving the client confidence that the project will be a success.

Health & Safety

At CERM-EX we take Health & Safety seriously. It's all about being proactive and stopping an accident before it happens doing something about it.







STRUCTURE SPECIALIST SERVICES

3D LASER SCANNING AND SURVEY

With an advanced surveying instrument that uses high speed laser, our surveyor is able to capture vast amounts of coordinates. The scanner "records" a 3D picture of a site, structure or construction by measuring angles and distances to points on surfaces which are visible to the scanner.

All data from the different scans are gathered in a so-called "point-cloud", which is a cluster of points in three dimensions. These points are later processed by a software program that produces 3D deliverables.

UNIQUE 3D SCANNING AND SURVEYS THAT SAVE VALUABLE TIME AND INCREASE PRECISION

CERM-EX has an integrated department of trained surveyors and data specialists to perform 3D scanning and survey.

With substantial experience in using this cutting-edge technology, our services can save you hours of costly shutdown time as well as the expensive human errors that invariably follow traditional methods or occur when the 3D technology is misapplied.

Quicker implementation

The scans can be used for controlling new components before their assembly, thereby enabling quicker assembly with fewer problems, less offshore welding and shorter shutdown time for process system.

3D surveying is ideal for facilitating quicker implementation of projects allowing for substantial financial benefit.

CERM-EX uses and develops specialised 3D laser scanning and survey tools. We offer precision surveys to engineering, design and construction project activities. The surveys help reduce and even eliminate the inherent geometrical problems associated with new or retrofit design and construction project.

Cutting edge technology

Our skilled personnel and state-of-the-art equipment capture real scenes with an unprecedented combination of speed, accuracy, completeness and safety. The technology is utilised in most of our process and production area projects.

3D laser technology facilitates the capture of physical objects such as structures, pipe work and mechanical components. Through survey analysis this is converted to a virtual but true to life as-built 3D model.

From this model existing component geometries and physical relationships can be extracted within a tolerance of few millimetres.



3D laser scanning and survey provides highly detailed and accurate data on construction projects. CERM-EX's dedicated Reality Capture department undertakes surveys, data management and knowledge sharing and learning, to improve project execution by minimising errors and costs, and optimising the project workflow.



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Any questions? Our specialists are ready to help!

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