

# United Gulf Steel

## Pioneer in the medium section structural steel products

United Gulf Steel, an ISO 9001:2000 certified company, is the only manufacturer of medium section structural steel products in the entire GCC region, which comprises of Saudi Arabia, UAE, Kuwait, Qatar, Oman & Bahrain. The state-of-the-art, fully automated mill with a capacity of 450,000 MTPA was designed and built using technology from SIMAC, Italy (now a part of SMS MEER Germany). The widest range of medium section products, a unique capability of United Gulf Steel, comprises of IPE/IPEA/IPEAA Beams, UPN/UPE channels, Equal Angles, Flat bars, Square & Round bars, which are manufactured to exacting international quality standards, and suited to local market needs. As the usage of structural steel is increasingly being identified as a measure of the economic strength and prosperity of a region, United Gulf Steel has endeavored to support the regional development with locally made international quality steel products.

Located in Saudi Arabia's largest Industrial City Al Jubail, known to be one of the world's largest centre for petroleum & petrochemical products manufacturing facilities, United Gulf Steel was set up as a private sector enterprise in 2001. Developed and promoted by a group of leading industrialists from the Gulf Cooperation Council (GCC) countries, the group is led by Mr. Mazen. K. Allahiq, a visionary leader and owner of MANSO group of companies with pioneering businesses in the region spanning petrochemical (Saudi Formaldehyde Company), wood laminates (MODECOR), industrial designing (SDEC), industrial cleaning (POLYTECH) and others.

Jubail Industrial city is home to Gulf region's petroleum & petrochemical base with approximately 6% of world total products originating here. The city is almost an engineering marvel, because of the large scale of earthmoving and associated civil engineering & infrastructure development. Today, Jubail industrial city with its state of the art industrial & support infrastructure has become Saudi Arabia's key investment destination in the field of basic industries like petroleum, iron & steel, cement, and others.

### **Product Overview :**

United Gulf Steel is the first medium-section steel rolling mill in the Gulf region with the capability to manufacture

international quality products with various standards such as DIN, ASTM etc. The state-of-the-art rolling mill from SIMAC can produce structure steel with close tolerance and the required mechanical properties, and cater to stringent requirements for critical applications. A highly responsive and flexible production capability producing tailor-made solutions has resulted in United Gulf Steel becoming a preferred supplier to key customers of structural steel in the region. United Gulf Steel is also able to minimize the lead time required to provide consistent with international quality structural steel Angles, Flat Bars, Beams, Channels, Round and Square Bars in a wide range of sizes.

**Beams :** United Gulf Steel produces superior quality IPE, IPEA & IPEAA Beams in a variety of different sizes, maintaining extremely close dimensional tolerance and accurate mechanical properties. Built to international specifications, the light weight IPEAA beams are most suited to GCC markets, and are primarily used in commercial and residential building structures and warehouses



**UPE / UPN Channels :** United Gulf Steel produces superior quality, light-weight steel UPE/UPN Channels in a variety of different sizes, maintaining extremely close dimensional tolerances and accurate mechanical properties. Built to international specifications, UPN Channels are found to be best suited for applications that require a strong steel framework, like warehouses etc.



**Equal Angles :** United Gulf Steel manufactures a wide range of angles in a variety of sizes, thicknesses & grades, including the much sought-after high tensile angles suited to critical applications in transmission towers. These are produced to international specifications, conforming to extremely close dimensional tolerances and accurate mechanical properties





**Flat Bars :** United Gulf Steel manufactures a wide range of Flat bars in a variety of sizes, thicknesses & grades including the much sought-after high tensile Flat bars suited to critical applications in pre-engineered buildings. These are produced to international specifications, maintaining close dimensional tolerances and required mechanical properties.



**Round Bars :** United Gulf Steel produces superior quality Round bars in different sizes and grades, maintaining close dimensional tolerances and required mechanical properties. Round bars are ideal for Pump Shafts, Scaffolding, Cold Drawing and Fastener applications.



**Square Bars :** United Gulf Steel produces superior quality Square bars in different sizes and grades, maintaining close dimensional tolerances and required mechanical properties. Square bars are ideal for Pump Shafts, Scaffolding, Cold Drawing and Fastener applications.



## **Technology :**

United Gulf Steel is Gulf's leading manufacturer of steel sections. United Gulf Steel employs state-of-the-art technology supplied by SIMAC of Italy, now a part of SMS, Germany. It offers a wide range of medium section structural steel products comprising of IPE/IPEA/IPEAA beams (80mm to 200mm), UPE/UPN channels (50/80mm to 200mm), equal Angles (40mm to 150mm), Flat bars (60mm to 250mm), Square bars (30mm to 80mm) and Round bars (25mm to 80mm) conforming to various international standards and required for use in construction and structural projects. As a manufacturer of high-quality structural steel sections, United Gulf Steel serves a range of large industrial fabricators covering pre-engineered building fabricators, power transmission and telecommunication tower fabricators, irrigation equipment manufacturers, scaffolding, cold drawing and fastener industries.

**The Production Facility constitutes of Reheating Furnace :** Natural Gas fired, 80 tph walking hearth reheating furnace which can take 130 sq mm, 150 sq mm & 200 sq mm Billets upto 12 meter length and maximum furnace temperature is 1300 degree C.

**Rolling Mill :** 15 stand continuous rolling mill which comprises of 6 roughing stands, 1 crop/cobble shear, 5 intermediate stands, 1 crop cobble shear, 4 finishing stands, multi-position quick-stand indexing device, on-line measuring

gauge & pinch roll and dividing shear. The mill rolls billets which are fed at a temperature of 1150 -1250 degree C. Mill stands are of various types such as Vertical, Horizontal, Convertible V/H and Universal to meet specific requirements of rolling sections.

**Cooling Bed and Finishing Equipment :** The cooling bed comprises of 54 meters long x 10 meters wide, water cooling system. A multi strand straightening machine is provided with 5 lower driven roll and 5 upper idle rolls. Finished equipment comprises of two friction saws, automatic stacker, tying machines & bundle take off table.

**Mill Automation System :** The mill is designed with level 1 & level 2 automation to improve mill productivity, reduce labour costs with minimal manpower and improve quality & safety.

### **Level - 1 systems**

Master Speed reference  
Automatic cobble detection  
Impact speed drop compensation  
Diagnostics and alarms  
Optimization of cut to length

### **Level - 2 systems**

Overall Supervisory control  
Material tracking supervision  
Maintenance scheduling

### **Measuring Equipment to Improve Product**

**Quality :** On line measuring gauges have been installed in the finishing stand to measure the dimensions of the sections emerging out of the finishing mill stand. These operate with the help of laser beams and cameras and displays the section profile with all critical dimensions.

**Laboratory :** Critical test equipment comprises of Universal testing machine, Brinell Hardness tester, Rockwell hardness tester, Spectrometer, Metallurgical microscope, Stereo Microscope, Ultrasonic hardness tester, portable infrared thermometer & others.

**Roll Shop :** With 3 nos. CNC machines, 1 milling machine and one saw tooth cutting machine

**Auxiliary Facilities :** Constitute of water treatment plant & cooling towers, weigh bridge, 34.5 KV switchgear, gas metering station, diesel generator room cum workshop, 8 nos. OHT cranes in billet storage and finish goods storage area.

### **Process Capability :**

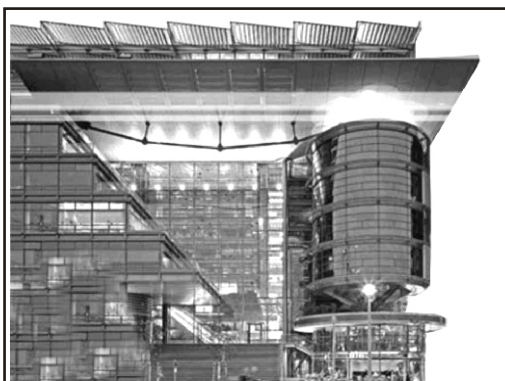
Factory production processes are constantly evaluated and fine-tuned to deliver the highest standards in the industry. ISO 9001:2000 version certified work instructions & standard operating practices are adhered to during each process execution. SAP ERP system has been implemented to execute transactions seamlessly at the enterprise level.

Once the billets are received and unloaded at the billet storage yard necessary the checks take place at each and every stage. The main ones include checking furnace temperature, atmosphere and scaling. This is followed by testing de-scaler pressure. Inside the Mill, there are tests for Mill load, rolling and finishing temperature, roll cooling, roll hardness and dimension.

In the cooling bed, tests ensure the dimension and surface of the product. At the finishing stage, they conduct tests to make sure of the precision of the dimensions, surface finish, straightness and length of the Medium Sections. On line Measuring Gauges has been installed in the finishing stand to measure the dimensions of the sections emerging out of the finishing mill stand. This operates with the help of laser beams and cameras and displays the section profile with all critical dimensions

Finally, during bundling and packing, further checking ensures the correct number of bars in a bundle, the weight of the bundles, and labeling of the products. The state of the art laboratory equipment is for testing and analysis, include instruments to measure tensile strength, a bend test, hardness tests, microstructure study, chemical analysis of the steel and failure analysis.

At every stage in production, it ensures a continuous improvement in the systems and processes. Consistent supplies to a large network of Stockists and End-users stand testimony to our quality and commitment. This has helped to become preferred supplier to the customers.



### **Quality Systems :**

At United Gulf Steel, quality control is an integral part of life. There are quality inspections at every stage of the process. The latest and most advanced technology is employed to make sure that only the finest quality Medium Sections reaches the Stockists and End-users.

United Gulf Steel have acquired the ISO 9001:2000 version certification for our processes and facilities. It also ensures that all its products meet with international standards of quality and delivery capability. Quality procedures cover all

stages, right from raw materials and production to delivery.

It begins with the raw materials. Only suppliers with a proven track record are used. Billets are sourced from integrated steel mills and utmost care is taken on the quality of products as this has direct influence on finished products. system continually monitors suppliers to make sure they always meet the highest standards of quality, reliability, delivery and costs.

Stringent in-process quality control is achieved through Level 2 automation systems that help us achieve a high level of perfection and accuracy in our production process. Inside the facility the processes are no less stringent and quality is a priority at every stage. Automated on line Measuring Gauges has been installed in the finishing stand to measure the dimensions of the sections emerging out of the finishing mill stand. This operates with the help of laser beams and cameras and displays the section profile with all critical dimensions An enterprise wide SAP ERP system provide seamless integration of the business processes. Customer requirements are captured from the order entry stage and finished products delivery is checked throughout to see that the product conform to desired standards and customer expectations. Product conformity with respect to chemical analysis, physical properties and dimensional specification are rigorously followed to deliver customer delight.

### **Network :**

The company distributes its products through a large network of stockists in the Saudi Arabia and other GCC & neighboring countries -Bahrain, Egypt, India, Iran, Jordan, Kuwait, Oman, Pakistan, Qatar, Sri Lanka, Sudan, UAE

Its direct customer base includes leading fabricators in pre-engineering building, power transmission and telecommunication tower, irrigation equipment, pump shaft, scaffolding and fastener manufacturers in the GCC region.

United Gulf Steel makes world-class medium section steel products more accessible to customers in the Gulf. It has been successful in substituting imported products with locally manufactured products. Using its extensive reach and faster delivery channels, these products are made available around the Gulf region, reducing cost of transportation and delivery time. The customer relationship is managed by a team of highly qualified professionals with experience in varied markets

In a short span of 4 years, United Gulf Steel has been able to establish itself as a clear leader in the region's structural steel market, warding off competition from various established international steel manufacturers. United Gulf Steel, instituted in response to a long-felt demand for all types of steel products in the GCC region, is a pioneering venture and has been exceedingly successful with numerous satisfied customers. It is set to be regarded as a benchmark in the regional steel business.

