In light of the intense competition and providing customers the highest quality and outstanding service levels. We are trying our best here at SMC to have a policy that will strengthen and improve its position on an ongoing basis to maintain customer satisfaction and also immediate response to market developments. Where that adherence to standards and specifications as well as modern machinery has enabled the institution to preserve the reputation of the competition between the companies since its inception.

The global use of iron since 1950 has more than seven-fold today and is expected to increase by a further half and half by 2050 compared to current levels to meet the needs of the growing world population and improve the level of services.

Countries around the world are witnessing increasing growth in their capacity to produce iron and steel by building more integrated factories and rolling units to secure their steel products for the implementation of large projects of infrastructure such as roads, railways, airports, ports, Services, energy production, oil and gas and others. In 2018, it is predicted that Africa's steel demand will increase.

Our vision is to be the world’s most reliable and innovative manufacturer, service and solution provider in the steel industry and our main mission is to supply high-quality steel products, providing related services and solutions to a worldwide client base while utilizing innovative technologies within an environment of motivated employees focused on continuous improvement, highest business standards, work ethics and corporate citizenship, leading to added value to our customers.
The MSP Electric Arc Furnace has a 40 tons capacity. The furnace melts steel scrap using Electric Power, Oxygen, Scrap Metal, Lime, Dolomite and Ferroalloys to produce Liquid Steel. The furnace produces 40 tons of steel each hour.

The liquid steel from the Electric Arc furnace is further processed at the Ladle Furnace. Here sulfur is removed, and elements are added to adjust the chemistry to the requirements of the steel grade being produced. Electric power is used to control steel temperature for further downstream processing.

The Liquid Steel from the ladle furnace is converted into solid square billets at the Continuous Casting Machine (CCM). The machine is capable of continuous casting 24 hours a day at the rate of 40 tons per hour. The turn over cooling bed ensures straight billets up to 12 meters in length. Billet sizes 100mm to 200mm are possible.
**MSP ELECTRICAL ARC FURNACE**

At the MSP Electrical Arc Furnace is a 40 tons capacity and we make use of Electric Power, Oxygen, Scrap Metal, Lime, Dolomite and Ferroalloys to produce Carbon semi-product, with a chemical composition that provides the desired steel grade. To enhance this process, we use equipment such as Electrical Arc Furnace EBT – DC, Tap weight 40 T, Transformer and 2 x 18.9MVA.

**MSP LADLE FURNACE**

Electric power, Lime, Ferroalloys and Argon or Nitrogen are what are combined to produce Liquid steel, giving chemical composition and temperature prepared for casting on continuous casting machine. Furthermore, for us to obtain the specified chemical composition of steel, we normally remove sulfur, purging the melt with argon or nitrogen, with averaging temperature.
**FUME TREATMENT PLANT**

The air pollution is one of the most impacting and visible emission from the workshops of steel production.

The environmental technologies are able to capture and treat the primary fumes from the furnace roof and the secondary fumes from the canopy hood on the building roof over the furnace shell, as well as the ladle furnace fumes and those from the material handling systems.

**INDUCTION FURNACE**

It’s a backbone plant it was constructed to support the business. The Induction Furnace capacity is 30,000Ton annually.
ROLLING MILL FACTORY

It's a continuous twist type of rolling mill of double strand type having gas fired pusher type reheating furnace of annual capacity from 300,000 to 320,000 ton.

The mill having two lines, one for producing TMT bars from sizes, 10mm to 32 mm and the other one is a wire rod line for producing 5.5 wire coils, BS standard different Grade.

Size of the billets being used for rolling is 130x130 x 6000 mm, and the grades being rolled for wire coils are SAE1006 and SAE1008 and being rolled as per ASTM A510M standards.

Process of production includes billets stacked on the charging rack and transferred by means of a roller table in front of a charging pusher; the billets are now pushed inside the furnace by hydraulic operated pusher inside reheating furnace as per mill demand.

Inside the furnace the billets are heated to temperature range from 1100°C to maximum 1250°C depending on the size being rolled. For bars the materials are quenched in series of pipes by high pressure water jet at room temperature to get the required mechanical properties of bar by TMT process, after which the formed bundles are transferred onto a trailer to be taken to the warehouse for final dispatch.

ROLLING MILL LABORATORY

The express-laboratory of the rolling mill is situated inside the mill and designated to determine physical and mechanical properties of TMT rebar's and wire rod in coils samples. Also, the geometrical parameters of the finished products are measured during rolling. The laboratory is equipped with all necessary equipment's to meet the quality requirements of any production standard around the globe (BS 4449, ASTM A510M, ISO 6935-2, ASTM A615M, NIS 117, etc.)
All analytical equipment in the laboratory is calibrated and maintained according to the established schedule. The equipment’s in the laboratory are as follows:

- Universal testing machines -WAW-1000D are used to carry out tensile tests at room temperature to determine physical and mechanical properties of steel specimens such as yield strength, tensile strength, ultimate load at break, etc.

- Center punch machine DB-30 is used to mark the starting length on specimen surface for further calculation of elongation.

- Laboratory oven SNOL 58/350 is used for thermal treatment of specimens (artificial aging).

- Twisting machine is used for twisting of wire rod samples.

- Laboratory scales are used to weigh the specimens and measure mass per meter.

- Bend & re-bend machine -YGGW-50A is used to carry out bend test to certain angle and further re-bending of specimens for bars.

- Auxiliary instruments: metallic rulers, calipers, micrometer gauges are used to measure geometrical parameters of rebar and wire rod as well as relative area of rebar rib.

- Spectrometer JB-750 is used to determine chemical composition of finished products (rebar, wire rod) and test chemical composition of billets intended for rolling.

SMC has a quality control team for inspection purposes, which are conducted at every step of the production cycle, as well as testing the raw material and finished products through the quality control department.

SMC laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The ISO-Certified laboratory of the rolling mill is situated inside the mill and designated to determine physical and mechanical properties of EAF rebars and wire rod in coils samples.
Our molten steel which is composed of pure ore iron raw material from the Arc Furnace route passes through continuous casters and is formed into steel billets, where the chemical composition is in accordance to the British BS449 B500b standard for Iron rod and ASTM A510M Grade 1006 and 1008 for wire rod in coils.

The finished products are strictly by the item number in compartments. It has capacity storage of rebar only as at 45,000tons and a capacity of stocking wire coil as around 30,000tons

What Distinguish SMC from other producers is based on the quality of the rebar being produced in the market such as its Chemical Composition, Mechanical Test (Yield, Tensile, Elongation, Reduction in area at Fracture), Bending and Re-bending ability, Fatigue Strength, Bond Characteristics, Ribs Condition, Corrosion Resistance Property, Cross sectional area, Macrostructure and weight per meter.
REBAR AND WIRE COIL STOCK

The finished products are strictly by the item number in compartments. It has capacity storage of rebar only as at 45,000 tons and a capacity of stocking wire coil as around 30,000 tons.

The total capacity of storing rebar and wire coil are at 75,000 tons. All these item is ready for customer shipment upon request from the sales department.

Future Provision plan to have a storage of capacity to 150,000 Ton.
SCRAP STOCK AND CATEGORIES:

There are five different kind of scrap:
- Heavy Special
- Light Special
- Mixed
- Car body
- And Cast iron

Each stocking is in compartments categories and transferred to the daily scrap yard which has an approximate capacity of 120,000 tons whilst the approximate consumption will be between 1,200 and 1,300 tons daily.

The purchase of all the scraps starts when delivery of scraps is received, it goes through the process of the weighbridge scale in and out (net weight) where its transferred to the offloading section and the specialist to determine and confirm from which category the delivery will belong during the offloading.

COMPENSATOR

The electric arc furnace (EAF) and ladle furnace (LF) generates harmonic current. The generated harmonic current flow through system impedances is causing harmonic voltages at respective harmonic frequencies, to avoid excessive harmonic distortion in the transmission grid, Compensator have internal harmonic filters that act as sinks for the harmonic currents. These filters also provide part of the required capacitive range. It is used to control the voltage at the bus where they are connected. Active Harmonic filter modules (AHFM), fixed filter capacitor banks (FC), Transformer – 24MVA (33/2KV) and Circuit breaker are the equipment’s been used.
**DUAL GAS TURBINE**

We have four (4) sets of gas turbine, that has dual burners (gas/diesel) and each turbine generates 15mw capacity with a Voltage of 11kv and all the set of four (4) turbines are synchronized.

**SUBSTATION**

The Substation run on 100mw capacity with two (2) main Transformer (63mva X 2) with a Voltage of 132kv, using Disconnectors, Surge Arrestors, Circuit Breaker and Power Transformers to generate/supply power at the plant, all are controlled through our SCADA system and PMS “Power Management system” for Synchronizing, selling and receiving power.
AIR SEPARATION PLANT

At the Air Separation Plant, we make use of electric power and soft water to produce Gaseous Oxygen with a capacity of 2500 nm³/h, Gaseous Nitrogen with a capacity of 2500 nm³/h, Liquid Argon with a capacity of 40 nm³/h and Liquid Oxygen or Liquid Nitrogen with a capacity of 25 nm³/h. Production process of oxygen, nitrogen and argon are done under low temperature air rectification. There is also equipment used for storage and gasification of air separation product which includes the storage tank, evaporators and pumps.

ASP MACHINERY

The Air separation plant equipment's consist of Air Compressor, Nitrogen Compressor, Oxygen Compressor, Gas Filling Room, MV/LV panels, Transformers, Heaters and Water Pool. Connected to our level of Automation and level 2 integrated to our level 3.V/LV panels, Transformers, Heaters and water pool.
WATER TREATMENT PLANT

At the Water Treatment Plant, we determine and analyze desalted water, fresh water and clean circuit water for regulation of daily production of water at the plant. We achieve this height by making use of Turbid meter, Conduct meter, Table-top suspended solids detector, Spectral Photometer and Device used to measure hardness of water.

WORKSHOP

Work Shop is specialized in all kind of mechanical structures, and mechanical project, to support all the sections in the plant (Rolling Mill, MSP, IF, Caterpillar, batching plant, Stores).

The workshop has different types of machines from the Traditional Lathe Machine, Milling and Drilling, Hydraulic Pressing, Welding Machines and CNC Machines, whilst the workshop is able to cover most of the mechanical work, fabrication and re-machining, related to installation and maintenance activities around the plant with a 24 hours service from our professional machinist.

TRANSPORT DEPARTMENT

SMC Transport Department is the transportation arm of Standard Metallurgical Company Limited (SMC LTD) which provides haulage services to the company’s operations.

It has the responsibility of conveying all SMC’s consignments (Billets, Containers, Materials, and Machines etc.) from the port and other locations to the factory and delivering its products to its numerous customers nationwide.

It is also engaged with providing other services within the factory as required, this includes carrying of products (Rebar and Wire Coil) from the factory to the Finished Product Warehouse, carrying of billets to the factory, transferring of materials within the factory.

Furthermore, we have established relationship with other Transport companies such as: Samcham, HST, Buildwell Plants and Equipment’s Industries, Sima Transport Limited, with which we share experiences and get information about the current market happening and developments as it relates with Transport. With this other companies, we have been following the trend in the transportation industry in general.
Standard Metallurgical Company LTD constantly improves the product quality. Our Enterprise has a valid quality management corporate system complied with international standard requirements ISO 9001 developed by Technical Committee of International Organization for Standardization.

Quality policy implemented at the enterprise is a basis for valid quality management corporate system. Quality policy main principles:

- We produce in compliance with requirements of regulatory documents.
- We maintain an active feedback with our consumers, efficiently respond to product quality information and promptly improve it.
- We constantly improve the production processes at all stages of product lifecycle to meet consumers' requirements.

The Company produces the hot rolled rebar steel and wire rod according to the standards: BS 4449:2005 (Great Britain), ISO 6935-2:2007 (International standard), NIS 117:2004 (Nigeria), ASTM A510M (USA) and others. Also, company in the future it is planned to produce continuous cast billets according to the technical specification SMC 001.016–2017.

The test procedure and methods in the testing center Standard Metallurgical Company LTD applied completely comply with the requirements of the international standards ASTM A370, ISO 6892-1, ISO 15630-1 and others.

The laboratory of the rolling mill is equipped with all necessary equipment's to meet the quality requirements of any production standard around the globe.

All analytical equipment in the laboratory is calibrated and maintained according to the established schedule. Activity and management in the Laboratory is performed with due regard for the requirements of the international standards ISO 17025 and ISO 9001.
The President’s message
At this company we aim to offer outstanding prospects because we stand for innovation, competitiveness and financial strength in addition to providing top quality products by “making steel our priority” through operational and environmental efficiency, profitable growth and friendly corporate citizenship. SMC aims to be a leading company in the metallurgical domain based on the significantly high production capacity we are planning to reach and the advanced technologies implemented at our factories. Sustainability is a huge concern for us and represents a big part of what we do through our electricity and gas saving consumption rates. Through our fruitful business relations with our clients we have recognized that transparency is crucial to the fostering of trust in our performance and to the ultimate satisfaction of clients.

SMC will consistently be a leading company in the steel industry by providing value potential services all around the globe. I highly appreciate the progress that has been achieved from the stake holders for their earnest contribution and ongoing success and the great efforts exerted by our hard working employees.
Since our early start we have established operating facilities that utilizes the best international technology in order to ensure efficient and high quality steel production. Acknowledging that better performance comes from stronger strategic commitment, we are constantly working to integrate sustainability priorities into our Corporate Strategy and into our balanced scorecard. Our approach to sustainability management ensures that all of our departments now have solid tasks assigned to them which will ensure that they work as a single unit to enhance our sustainability performance. SMC consists of several operational plants working together in synchronization to produce a constant high quality steel. We work towards having a leading management and a major success in initiating several programs to recycle our waste while we continue to maintain our high health and safety standards.

SMC's underlying business goal is to be an efficient and competitive producer of finished steel products. To achieve this, the Company continually and significantly invests in expansions in the areas of processing, manufacturing and information technology. In addition, these investments help to improve product and service quality, reduce the Company's environmental footprint and increases safety for its workers and customers. SMC intends to produce 300,000 tons of rebar, wire coil and billet. Our products portfolio enables us to meet customer requirements across construction industries. We are always working hard to pursue a leading path actively and assertively in the coming years through our quality standard at SMC which is the commitment of being responsible corporate citizens and the intention to operate ethically, fairly, and honestly with all our clients to operate in both the letter and the spirit of laws.
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