



OPTIMIZE ECONOMIC EFFICIENCY

APPLICATION ON MODERN TECHNOLOGY AND IMPROVEMENT ON PRODUCTION SYSTEM

In order to provide to consumers best quality products which compete by quality and affirm its position in the market, Hoa Sen Group always concerns on investment of advanced technology production lines and equipment, and leads in new technology application with environment friendly. The detail is as follows:

- In 2007, Hoa Sen Group was the first private enterprise in Vietnam to invest in Galvanizing line with non-oxidizing furnace (NOF technology).

- In 2009, Hoa Sen Group was the first enterprise in Southeast Asia to invest in hot dip galvanizing line with non-oxidizing furnace (NOF technology).

- In 2010, Hoa Sen Group was the first enterprise to invest synchronously in centralized blending system, plastic pipe line of Battenfeld – Cincinnati applied by European technology and laboratory qualified Japanese standard in order to provide high quality products with competitive price to consumers.

- In 2011, Hoa Sen Group completed Phase 1 of Hoa Sen Phu My Steel Sheet Plant Project. Currently, this is one of the largest steel sheet plants in Southeast Asia with modern and synchronous production lines and machinery system.

- In 2017, the Group has deployed the investment in Hoa Sen Phu My Hot-Dip Galvanized Steel Pipe Plant Project. In the first phase of the project, Hoa Sen Group has invested in a hot-dip galvanized steel pipe line with a capacity of 85,000 tons/year. The lines use modern technology imported from Europe. The output meets the standards of quality, good thickness of coating, good coating adhesion, highly applicable in many constructions.

ENHANCING PRODUCTION CAPACITY, MEETING THE DEMAND OF CONSUMERS

In the past fiscal years, Hoa Sen Group has deployed and put into operation large-scale production projects across the country in the North-Central-South in order to implement the strategy of perfecting the production system, improving supply capacity, meeting consumer demand and contributing to optimize the cost of transportation.

Phase 1 of Hoa Sen Nhon Hoi Binh Dinh Plant Project has officially been put into operation since October 2017 including 03 main production lines: 01 Galvanizing line with capacity of 180,000 tons/year has been operating since September 2017, 01 Color coating line with capacity of 45,000 tons/year has been operating since June 2017, 01 Slitting line with capacity of 100,000 tons/year has been operating since May 2017. At the same time, starting Phase 2 of the plant, expectedly investing in 05 production lines: 01 Pickling line with capacity of 800,000 tons/year, 01 Cold rolling line with capacity of 350,000 tons/year, 01 Galvanizing line with capacity of 250,000 tons/year, 01 Color coating line with capacity of 150,000 tons/year, 01 Acid recycling line with capacity of 5,000 liters/hour.

With the investment of production lines and modern equipment according to European standards of Danieli - Italia Supplier with vertical production process and strict inspection, from input materials to finished products, the plant has produced quality steel products; meet international standards and strict requirements of domestic and foreign markets. It is expected that the plant will complete both phases by the end of 2018, contributing significantly to the local budget, creating jobs for about 700 workers. When the plant goes into operation, it will meet the demand of the Central – Tay Nguyen provinces, at the same time export to Laos, Cambodia, Thailand, Europe and America.



Besides expanding the plant system in the Central and boosting production in the South, Hoa Sen Group continues to build the plant system in the North - one of the key markets of Hoa Sen Group in the coming time. Therefore, the investment in large plants in the North is very important in improving the ability to supply steel sheet, steel and plastic products for the North market in order to meet the needs of customers in this area.

Hoa Sen Group started the construction of Hoa Sen Nghe An Plant in June 2015 on an area of 45 hectares, the total designed capacity of 1 million tons of steel sheet and steel products/year. At present, Hoa Sen Nghe An Plant completed the 1st phase and has basically completed the 2nd phase with putting a series of production lines into operation, including: 01 Pickling line with the capacity of 800,000 tons /year, 02 Coll Rolling lines with the capacity of 800,000 tons / year, 02 Galvanizing lines with total capacity of 800,000 tons/year, 02 Color coating lines with the capacity of 240,000 tons / year, 02 Slitting line with the total capacity 200,000 tons / year, 01 Strimming line with the capacity of 400,000 tons / year. The products of the plant are available in American and European market. These are difficult markets which require strictly on product quality and delivery time. The export of large consignments to these markets is the most obvious demonstration of Hoa Sen Group's competitiveness on international market. Up to now, the plant has basically completed the investment in stages of vertical production process, from the input material is hot rolled coil to the output products are steel sheet and steel products and take full capacity of the plant.

In addition, Hoa Sen Group has invested in Hoa Sen Ha Nam Plant in Ha Nam province on an area of 20 hectares, producing 02 main products, including plastic pipes with designed capacity of 20,000 tons/year and steel pipes with the capacity of 110,000 tons/year.

To continue the production expansion plan, on March 1, 2017, Hoa Sen Group started the construction of Hoa Sen Yen Bai Steel Pipe Plant in Tran Yen district, Yen Bai province. The project is built on an area of 05 hectares, expected to produce two main products: steel pipes and insulated steel sheet.

Expanding the production system is one of the key strategies of Hoa Sen Group over the past years. Currently, Hoa Sen Group owns 11 large plants located across the country in the North - Central - South. These plants are invested in synchronous machinery system, applying modern technology to production, producing products that are consistent in quality and meet international standards. With the establishment of plants in each region, Hoa Sen Group will reduce the cost of transportation, short delivery time; quickly meet market needs in every area.

In addition to expanding its production system, Hoa Sen Group also focuses on increasing Hoa Sen popularity to every corner of the country by expanding its branch network and stores. Currently, Hoa Sen Group owns more than 350 branches, bringing the best products and shortest delivery time to the end users in the country.



DIVERSIFY PRODUCT

Hoa Sen Group constantly research new products to meet the increasingly diverse demands of consumers:

- In 2012, Hoa Sen Group introduced Metallic steel sheet product with the outstanding feature of metallic surface with high aestheticism.

- In July 2014, Hoa Sen Group launched Hoa Sen wood pattern steel sheet. The outstanding feature of wood pattern steel sheets is their surfaces which are coated with the paint of wood pattern. Therefore, they are highly aesthetic and can be applied to making outdoor products and furniture which bring the subtlety and luxury to the houses. Hoa Sen wood pattern steel sheets are durable, beautiful, luxurious and suitable for construction works and houses. With superior durability, the wood pattern steel sheet product may have more than 20 year's long-lasting usage.

- In August 2014, Hoa Sen Group continued to launch Hoa Sen wrinkle steel sheet. Wrinkle steel sheets are Galvanized steel sheets and Pre-painted aluminum-zinc alloy coated steel sheets with special wrinkle pattern on the surfaces. The outstanding features of wrinkle steel sheet are their high aestheticism, high durability, good heat resistance, good moisture resistance, easy installation, etc. The products are used flexibly for construction works and houses such as ceilings, walls, roofs, etc.

- Besides famous steel sheet products, Hoa Sen Group also supplies diversified products of galvanized steel pipe and plastic pipe with superior specifications:

- + Hoa Sen steel pipe is produced by modern production lines in accordance with strict quality control process to meet high quality standards of JIS G3444 (Japan), JIS G3466 (Japan), ASTM 500M (USA). Hoa Sen steel pipe product has clean, smooth surface, even thickness, high flexibility and good zinc adherence.

- + Being manufactured by modern production line with the advanced European technology and the centralized blending system, the uPVC plastic pipe products are homogeneous and high quality in accordance with standards of BS 3505:1968/BS EN 1452-2:2009 (England); AS/NZS 1477:2006 (Australia); ISO 4422:1996, TCVN 6151-2:2002 (Vietnam), TCVN 8699:2011 (Vietnam). Hoa Sen Plastic Pipes are widely used in various fields such as civil and industrial water supply and drainage, buildings, telecommunication constructions, etc.



+ In March 2016, Hoa Sen Group launched superior HDPE plastic pipe products. HDPE plastic pipes are manufactured by advanced technology of Cincinnati (Germany) and strict quality control process. Hoa Sen Group's laboratory is Japan, Canada, etc. Hoa Sen HDPE plastic pipes advantages include non-toxic, safety for users' health, long life span, high tightness (watertight, airtight), leak-free, non-corrosion by acid solutions, neutral solvent, ability to resist against extreme weather conditions. Hoa Sen HDPE plastic pipes are applicable for water supply, drainage, sewage conveyance, sand pumping, industrial and agricultural water leading system, and other various applications.

+ In fiscal year 2015 - 2016, Hoa Sen Group also launched Hoa Sen PP-R plastic pipe product. Hoa Sen PP-R plastic pipes, which are manufactured by non-toxic PP-R (Polypropylen Random Copolymer) materials, are absolute safety for users' health. Especially, Hoa Sen PP-R plastic pipe has heat resistance up to 95°C is used for hot and cold water conveyance in civil and industrial constructions and solar energy – using pipeline system. The products also have ability to resist against wide array of chemicals, and have non-corrosion from acid solutions, alkaline solution, saline solution, neutral solvent, etc.

+ In the fiscal year 2016 - 2017, the Group started to invest in Hoa Sen Phu My Hot-Dip Galvanized Steel Pipe Plant. Expected in March 2018, the project will go into operation and launch the product "Hoa Sen Hot-Dip Galvanized Steel Pipe". Hot-dip galvanized steel pipes are superior in the thickness of coating in comparison with normal galvanized steel pipe. With modern technology, hot-dip galvanized steel pipe line will produce products having coating mass with equal thickness, ensuring high corrosion resistance, keeping the quality and sustainability of works, machinery and equipment, at the same time maintaining aesthetics. Hot-dip galvanized steel pipe products will have shiny surface, no need to have a protective coating, environmentally friendly, especially resistant to severe environmental conditions.

APPLYING ADVANCED MANAGEMENT PROCESS, PERFECTING MANAGEMENT OPERATION AND MODEL

• Hoa Sen Group defines business management is one of the most important factors to enhance stable and efficient economic growth, to keep sustainable development on track in long-term. In parallel with building strong governance system based on complying legislations and applying most advanced governance model in the world, Hoa Sen Group has issued system of internal policies in order to build integrated and decisive governance mechanism.

• In the fiscal year 2016 - 2017, the Group focused on perfecting and putting ERP system into operation, improving synchronization and standardization in professional operations, creating a premise for the application of new technologies in order to meet the demand for future development.

• In the near future, the Group will continue to research and implement restructuring activities to perfect and improve the management system. In particular, the Group will focus on the restructuring of the distribution system under the Provincial branch model. It is expected that the whole distribution system management model will be restructured at the following management levels:

