COLUMBUS STAINLESS

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UNLOCKING POTENTIAL

Columbus Stainless, based in Mpumalanga, South Africa, is taking a key role in a local logistics initiative designed to boost trade, reduce the cost of doing business in the area and unlock the region's growth potential

Founded in 1966, Columbus Stainless is South Africa's and Africa's only producer of stainless steel flat products, which can be found in just about everything from a kitchen sink to a quality wristwatch. And thanks to the seemingly never-ending potential for stainless steel as a metal for the future, Columbus is remaining firmly focused on its goal of becoming one of the leading suppliers of stainless steel in both the domestic market and the global arena.

The major global steel group, Spain-based Acerinox, holds a 76 per cent shareholding in Columbus Stainless, with the remaining 24 per cent held by the Industrial Development Corporation (IDC). Columbus Stainless is situated in Middelburg in the Mpumalanga Province of South Africa, with its technologically advanced, fully integrated plant a single-site operation, giving the company ample flexibility to adjust quickly to changes in the market.

3CR12

Columbus' patented utility ferritic stainless steel

Stainless steel plays a major role in the hygienic preparation or storage of almost everything that we eat or drink. All modern vehicles boast stainless steel components in critical areas, such as exhausts, safety belt buckles, airbag gas cylinders and catalytic converters. Increasingly, stainless steel is also finding new applications in decoration, signage, shop fittings, architecture, furniture, appliances and technology.

Stainless steel is generally seen as a family of chromium-containing alloys, all of which contain at least 11 per cent chromium. The chrome oxide layer on the metal is what makes stainless steel corrosion resistant, and although the layer is only about a micron thick, it is incredibly strong and when damaged, regenerates itself as long as there is oxygen available.

The main branches of the stainless steel family tree are martensitic, ferritic, austenitic and duplex type stainless steels. Ferritic stainless steels are plain chromium type steels containing 12 to 18 per cent chromium, the balance being mainly iron. Austenitic stainless steels typically contain 18 per cent chromium and eight per cent nickel, with the balance being mainly iron, while some austenitic stainless steels contain two per cent molybdenum for enhanced resistance to pitting corrosion.

The duplex stainless steels have a microstructure, when heat treated properly, of nearly equal proportions of austenite and ferrite. This microstructure ensures that the duplexes are much more resistant to stress corrosion cracking (SCC) than austenitic stainless steels.

Columbus is proud of its modern and efficient stainless steel production facility, designed to meet the changing demands of users in the domestic market and around the world. Producing a wide range of products in austenitic, ferritic, utility and duplex grades, Columbus can offer stainless

Annealing and pickling lines

Product at Maputo Harbour

steel suitable for most applications. Backed by sound technical support, it is also able to make recommendations on correct material selection as part of its comprehensive customer support process.

Columbus' patented utility ferritic stainless steel, 3CR12, is suitable for use in the corrosion resistance needs gap between higher alloyed stainless steels and coated carbon steels. With production to date of over one million tonnes, the product has proven to be more cost effective than carbon steels in many corrosive environments, including in wet abrasion applications. Columbus produces two 3CR12 variants: 3CR12 is the original Columbus proprietary grade and is titanium stabilised to improve the resistance to sensitisation after welding. 3CR12L was introduced in 1989 and is a low carbon unstabilised grade.

3CR12 has found widespread use in numerous industries from steam generating turbine blades to wear plates in gold mines; from sports car chassis to roofing and cladding. 3CR12 is successfully used in wet sliding abrasion conditions and material handling applications in the agricultural, mining and power generation industries. It is also widely used in the transport industry, finding applications in passenger vehicles, rail freight wagons and coaches, trailers, trucks and sports cars. In industrial structural applications, 3CR12 is used for walkway systems (flooring, stairs and hand railing), cladding and roofing, piping, cable racking, electrical enclosures and piping and utility bridges. It is also used in water and sewage treatment for tunnel liners, tanks and weirs. In particular, the manufacture of coal wagons in 3CR12 is the largest and arguably the most successful application in the product's 30-year history.

> "COLUMBUS STAINLESS IS SOUTH AFRICA'S AND AFRICA'S ONLY PRODUCER OF STAINLESS STEEL FLAT PRODUCTS"

At present, some 25 per cent of all Columbus' products is sold into the rapidly growing South African and sub-Saharan markets. The company's exported products are channelled through a well-developed network of agents and group sales outlets operating in Europe, the Americas, the Middle East and the Far East; in addition, Columbus trades directly to a number of end user and some re-roller customers.

One major project Columbus Stainless has been involved in since its inception is the Maputo Corridor Logistics Initiative (MCLI), as it provides strategic positioning for exports and imports. The first export trial via Maputo Harbour took place on 9 October 2003. Since the inception of MCLI, Columbus Stainless has successfully shipped 376,357 tons through the Port of Maputo, its ultimate goal being to export 30 per cent of material through the port.

The Maputo Development Corridor runs through Mpumalanga and as a business situated in the province, it was a logical decision for Columbus to ship its steel through Maputo, as it is situated only 420 kilometres from its plant—as opposed to the Port of Durban, which is 750 kilometres. This has resulted in an approximate saving in distance and travelling cost of 43 per cent, and a 45 per cent saving in transit time.

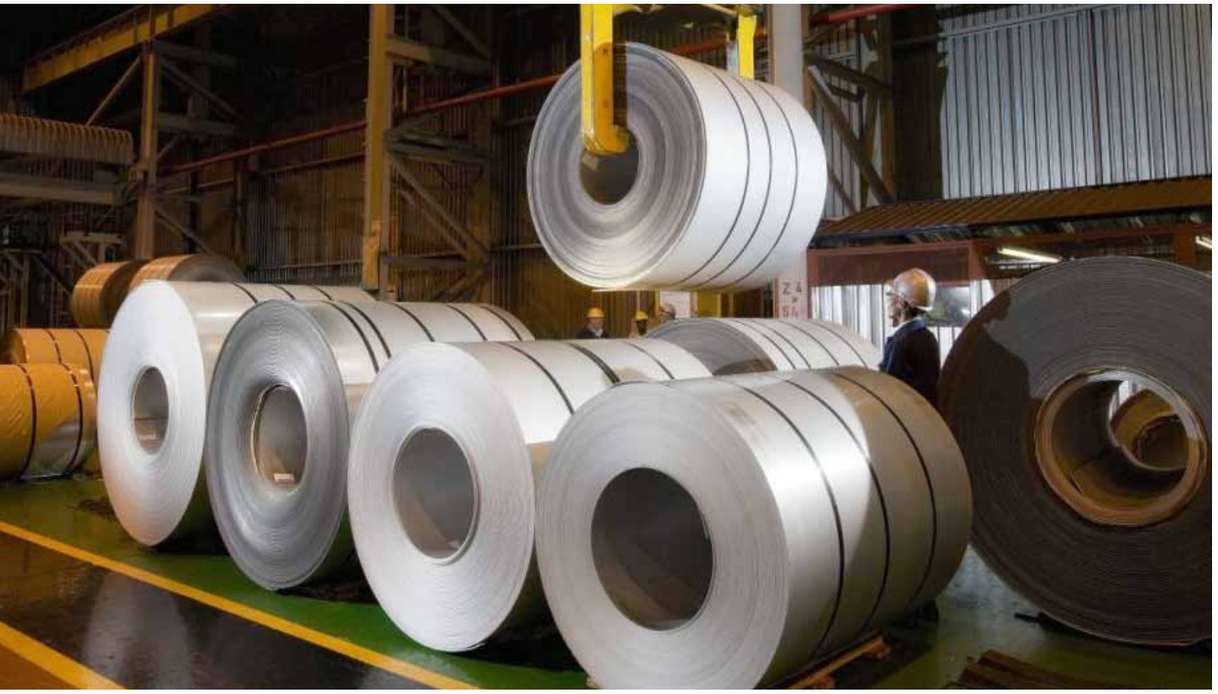
Columbus Stainless is able to transport material to Maputo using both road and rail. Both these modes of transport have improved dramatically over the past few years through constant investment. One major improvement and attribute to the

Corridor was the Commercial Border Post erected at Lebombo, which allows trucks carrying cargo to move through the border more efficiently and effectively.

Columbus Stainless currently ships breakbulk and containerised material through the Port of Maputo; in addition, breakbulk material can also be containerised on-site at the port, offering greater flexibility as well as a greater range of services.

Columbus Stainless currently makes use of Mozambican transporters and drivers to boost the Mozambican economy through job creation. By using Mozambican transporters it encourages enhanced international trade between the two countries and improves the economic growth of the region. Infrastructural development is undoubtedly the key to unlocking investment potential in this region, Columbus believes; and

> "COLUMBUS STAINLESS CURRENTLY MAKES USE OF MOZAMBICAN TRANSPORTERS AND DRIVERS TO BOOST THE MOZAMBICAN ECONOMY THROUGH JOB CREATION"



Coils

Stainless steel is often chosen for its corrosion resistance

Transnet Freight Rail has already made substantial investments in improving rail infrastructure and increasing the number of train slots through the Maputo Corridor—a big step towards unlocking the region's growth potential.

Of course, it is costly to haul cargo by road transport to Maputo due to lack of imports to South Africa and the existence of so many toll gates. As an incentive, Columbus believes SANRAL (the South African National Roads Agency Limited) could come on-board to subsidise truck operators, with a view to promoting and reducing the cost of doing business in the Corridor. A subsidy initiative would attract many operators to utilise the Maputo route and also create a competitive environment in which transport service providers could offer competitive rates to cargo owners, Columbus believes.

Since shipping from the Port of Maputo in 2003 and making use of and contributing to MCLI, the overall impression gained by Columbus was that all the parties involved were very keen to improve and grow business in the region. All had proved very willing to accommodate the company's requirements and negotiate alternatives.

Taking everything into account, the future for Columbus Stainless and MCLI looks very promising indeed. BE

For more information about Columbus Stainless visit: www.columbus.co.za