

# Hot Rolled Plate Product Developments

Willem Britz

208/02/07

A contract to produce 232 diesel locomotives using EN10025-3-S460 for the manufacturing of chassis and body components was recently awarded to China North Rail (CNR). The locomotives are the first to be procured by Transnet in line with an instruction note issued by the National Treasury, stipulating that suppliers meet specific local-content thresholds set by the Department of Trade and Industry (DTI). Under the DTI designation, the local-content threshold for the diesel locomotive is set at 55%.



*From left to right: Jan Kotze, Market & Product Development Marketing Manager, FSP and Willem Britz, Market & Product Development Senior Specialist, FSP.*

With this in mind, ArcelorMittal South Africa is currently in the process of developing this new required quality that provides higher strength than the S355 grades that are normally used. Other than this contract, this steel grade can also be used for welded parts that have to withstand high levels of strain. Typical other applications are bridges, pylons, and other architectural structures.

As it stands, the Hot Rolled Plate team is currently busy with development and trials, and aim to deliver prime plate by quarter two 2018.

Another promising niche product development to look out for in quarter two, is the new quality development of Chromium rich EN10025-S-355 JR + AR (Laser) steel to produce an improved laser cutting surface finish and also a faster cutting speed. With the fast growing laser cutting South African market, more resistance is experienced from the profilers regarding the loose scale on plate surface. To prevent market loss and to gain on imported Laser cutting steel (mostly shot blast and primed plate from China), is it essential to develop a competitive product to compete in this market.

Furthermore, several product developments are also undertaken with the primary aim being to prevent imported material. Such a development is the Zinc-based Hot rolled plate primer that took flight as the need for more robust corrosion protection during the storage and manufacturing/repairing of ship hulls arose. Keeping in mind the severe coastal weather conditions, this product has improved corrosion protection over general water based primers. It is also water based and has quick drying and good weldability properties. The aim is to introduce it to the market, also by quarter two 2018.

Another import prevention development is planned to be introduced to the market by the end of the first quarter 2018. In the past, ArcelorMittal South Africa supplied EN10028-3-S355NH for the manufacturing of coal fired boilers. Then in 2016, the international design code EN12953 was revised which strictly prohibited the use of P355NH for the manufacturing of coal fired Boilers. From this, the only specified steel grade to be used for coal fired boilers now is EN10028-2-P355GH. This revision led our customers to import P355GH while we develop the steel grade.



*Illustration of laser cutting in progress*



*Ship hull construction*