

The Steel Industry and the Energy Sector - a unique relationship

By Eng. Saeed Ghumran Al Remeithi, CEO of Emirates Steel, a subsidiary of SENAAT, one of the UAE's largest industrial investment holding companies, serving as a Co-Host Sponsors for World Energy Congress.

The steel and hydrocarbon sectors have historically enjoyed a symbiotic relationship throughout their existence. Steel production requires large amounts of energy, traditionally generated from oil and gas, while the extraction and transportation of hydrocarbons requires steel: to build oil rigs, gas pipelines and so-on. The steel industry depends on the energy sector, both as a supplier and a customer, and likewise, the energy sector relies upon the steel industry.

As we approach the 24th World Energy Congress in Abu Dhabi, to be held for the first time in the Middle East, my thoughts, and the thoughts of my colleagues who work in both the steel and the upstream hydrocarbon sectors, turn to how we can use this symbiotic relationship between our two industries to help work toward new paradigms of energy consumption to create a sustainable and greener future.

Part of our approach at Emirates Steel is to focus on the opportunities for collaboration we have with our partners in the energy sector. Because we are both dependent on each other for resources, we are able to more easily identify areas of mutually beneficial collaboration. A key example of this approach at Emirates Steel is our carbon dioxide sequestering facility that was developed by ADNOC and Masdar Clean Energy.

Carbon dioxide is a waste product of the steel manufacturing process, and one which we are keen to curb in our production. Our facility sequesters over 2,000 tonnes of CO₂ per day, or 800,000 tonnes per year, and pipes the gas 50km to ADNOC oil fields, where the gas is used for enhanced oil recovery. Through working in partnership with a hydrocarbons producer and a green energy company, we have introduced a new dynamic to the symbiotic relationship between steel and energy.

For us to change the nature of our relationship with the energy sector, we also have to look at how we engage with the sector. At Emirates Steel, we are particularly focused on investigating the processes we use to produce our steel to ensure that we are using energy resources efficiently when manufacturing our products and delivering services and solutions.

We have implemented a range of processes in our company to reduce our consumption of oil and gas: these include the installation of hot billet charging in our second rolling mill to reduce the amount of gas used in reheating steel billets; the introduction in 2016 of multipurpose burners at our Electric Arc Furnace in Steel Making Plant 1, to burn gas efficiently when heating metal scrap; or the completion in 2017 of our patented twin billet casting process in our Continuous Casting Machine, allowing us to create more steel using less energy.

Through providing sustainably produced steel to the hydrocarbon sector, peaceful nuclear energy sector, and working with renewable energy companies to produce new forms of energy, the steel

sector is seeking to leverage its position as the interface between the energy and heavy industry sectors to develop a more sustainable and green future.