

QATAR STEEL

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QATAR STEEL

*Sincere Felicitations
&
Best Wishes to*



H.H. Sheikh Hamad Bin Khalifa Al Thani
Emir of the State of Qatar

H.H. Sheikh Tamim Bin Hamad Bin Khalifa Al Thani
Heir Apparent

and the people of Qatar on the occasion of
Qatar's National Day.

Dear Reader

We are pleased to bring you Issue No. 91 of Qatar Steel Magazine. It coincides with Qatar's national day, which was celebrated by the entire country, under the wise leadership of H.H. Sheikh Hamad Bin Khalifa Al Thani, Emir of the State of Qatar and HH Sheikh Tamim Bin Hamad Bin Khalifa Al Thani, the Heir Apparent.

This issue will also give you a brief account of the record achievements of the Direct Reduction Department and the Iron Melting Department.

During this period Qatar Steel participated in many events including the 'Partnership for Progress' conference along with Kumba Company of South Africa; a workshop organised by the Ministry of Environment and a fire-fighting training course organised by the National Academy for Professional Training (NAPT).

This issue also covers many other interesting news and views.

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Partnership for Progress Conference



Qatar Steel and Kumba Iron Ore (Kumba) of South Africa organised a joint technical conference in Doha on 13 October 2009 with a view towards exploring opportunities for co-operation with other steel makers in the Middle East/North Africa (MENA) region.

Kumba is the world's fourth largest provider of seaborne iron ore. Its products were tested by Qatar Steel, and were found to offer direct reduction (DRI) producers an alternative for more costly raw materials. Direct reduction shaft furnace operations are very popular in the MENA region due to the abundance of gas resources.

Sheikh Nasser Bin Hamad Al-Thani, Director and General Manager of Qatar Steel, invited Kumba to introduce its products to the MENA market at a joint technical conference in Doha.

The conference was inaugurated by Mr. Ali Bin Hassan Al Muraikhi, Commercial Division Manager, Qatar Steel. A number of steel manufacturing companies from the Middle East attended the conference.





A delegation from Kumba Iron Ore Company of South Africa visited Qatar Steel's plant facilities in Mesaieed Industrial City on 12 October 2009. The delegation, which included the Chairman and a number of specialised engineers, was received by Mr. Saad Rashid Al Mohannadi, Procurement and Warehousing Division Manager, Mr. Kefah Mustafa Al Mulla, Administration Division Manager and a number of managers and senior officials of Qatar Steel.

A documentary film on the various production stages at Qatar Steel was shown to the visitors and a plant tour was arranged for them in order to have a first-hand insight into

the Company's operations. At the end of the visit Mr. Yousef Qassim Al Emadi and the Chairman of Kumba Company exchanged souvenirs. The visitors thanked Qatar Steel for the generous reception they received and praised the strong relationship between the two companies.

In the evening Qatar Steel hosted a dinner reception for the Kumba delegation as well as for other steel company delegations from the Middle East. The reception was also attended by HE the Ambassador of South Africa and Managers and Senior Officials of Qatar Steel.

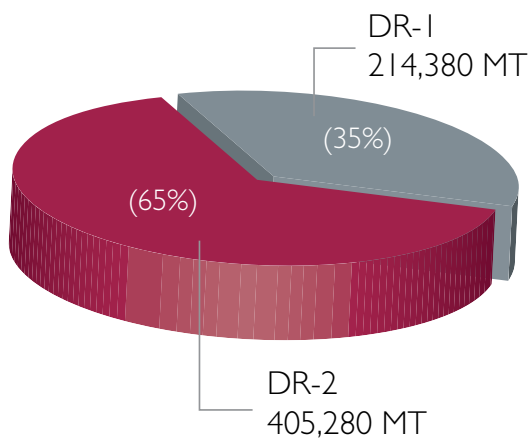


Direct Reduction Department

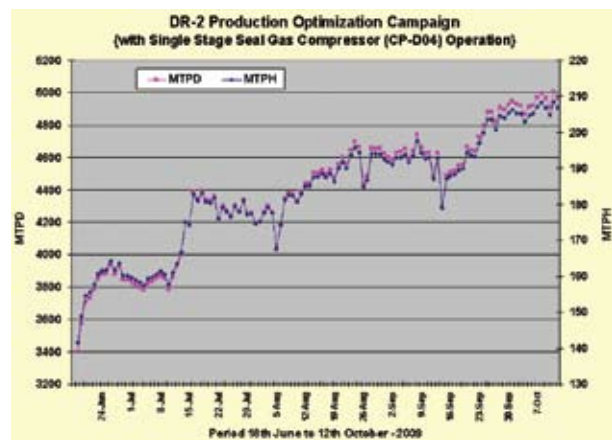
DRI Production

- During the 3rd Quarter of 2009, following the receding of the recession effects on production, both the Direct Reduction Modules (DR-1 & DR-2) operated at full capacity.
- 619,660 MT of DRI was produced during Q-3.
- DR-2 Module operated with a 2nd stage seal gas compressor alone due to an outage in its 1st stage compressor. However, process optimizations and various in-house innovations, ensured that the plant was operated at its full capacity and new production milestones were achieved.

Q-3 Production in DR Modules



DR-2 Module Production Optimization during Q-3



DRI Quality

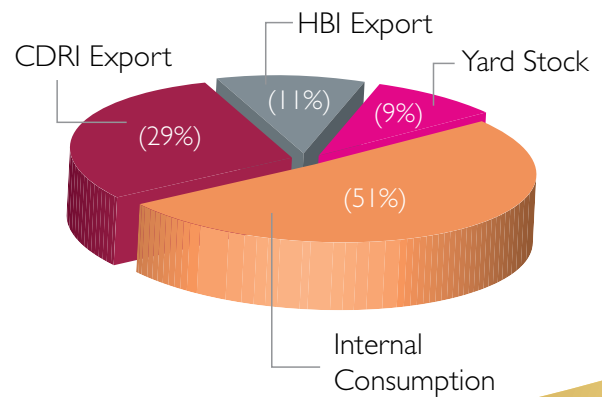
- As per the revised specifications of our Steel Making Shop, DR-2 produced CDRI with >2.50% carbon content.
- This was the first time CDRI was produced with carbon content >2.50% at Qatar Steel, a challenge that DR successfully achieved.

Month	CDRI				HBI	
	DR-1		DR-2		DR-2	
	Metallization (%)	Carbon (%)	Metallization (%)	Carbon (%)	Metallization (%)	Carbon (%)
July-09	95.40	2.22	95.45	1.90	95.48	0.99
August-09	95.15	2.10	95.58	2.03	95.84	1.20
September-09	95.68	2.22	95.59	2.34		
Present Control	95.27	2.09	95.77	2.61		

DRI Consumption in Q-3

- Qatar Steel consumed a major part of the CDRI production for its internal manufacturing processes.
- HBI was produced exclusively for external customers as per the market demand.

Production Distribution in Q-3



In-house Training for Qatari Trainees

- An in-house training programme was conducted for three Qatari trainees from 4th October till 15th October 2009.
- Mr. Tarek Solaiman, Shift Supervisor in the DR-2 Module, was the Training Co-ordinator and 17 experienced employees from DR Operations participated in the training programme as faculties.



Closing Session of the In-House Training Programme

Environment & Safety

- External Auditing for ISO 14001 was conducted on 20 October 2009.
- The auditing included the Scope Expansion of DR-2 Module for the new product, HBI.
- DR Modules completed 71 consecutive months without any LTA (Loss Time Accident).



DR Representatives with the ISO 14001 Auditor



Good Housekeeping Practices - the Key to High Safety Standards

Steel Making Department

A new monthly record of 153,700 tons of molten steel was achieved in July, exceeding the previous record achieved in May 2008 (146,383 tons) by 8%.

A new daily record of 77 heats (6,141 tons) was achieved on 11 November surpassing the previous record of 76 heats achieved on 1 November (6,083 tons).

A number of new records have been achieved at the new Danieli EF/LF/CC-2R production line since June 2009.

1. Heats/day increased from 28 (2295.71 tons) in June to 30 (2381.45 tons) on 1st November.
2. Monthly production in July was 56,983 tons (previous record was in June 2009 - 48,028 tons).
3. Tundish Life on CC increased from 13 to 40 heats by making use of the ladle shroud.
4. Average tons/day increased from around ~1700 t/day to close to 2000 t/day (Figure 1).

There are a number of reasons for these large increases in productivity. However, the main reasons are:

- Increase in oxygen usage, via 2 coherent oxy-jets (Figure 3), from ~20 to 30 Nm³/t.
- Increase in carbon in DRI, from ~1.4% to 2.6% (Figure 4).

- Decrease in slag basicity, from 2.1 to 1.7 to reduce lime/dolo additions and slag volumes.
- Introduction of a second ladle transfer car and ladle purging station on both production lines.
- Introduction of ladle shroud on CC2R.

The first three factors contributed to a reduced energy consumption (Figure 2), from ~600 to ~530 KWH/t and much reduced melting times.

The last two factors increased the flexibility in the melt shop as EAF's now do not need to be stopped in the event of casting machine problems on other casters.

Utilising oxygen together with carbon and replacing electrical energy is called 'Chemical Heating'. This new technology was first introduced at Qatar Steel in the EF2R (Coherent Oxygen Jets) and since May 2009 it has been introduced at EF3 also.

This is the main contributor for shorter heat times and higher production output, because both chemical and electrical energy are used simultaneously for accelerated melting without the need to increase the power input by installing larger transformers.

It is expected that the billet production of the existing facilities can be increased to 160,000 tons/month.

Fig. 1) Molten Steel Production (tons/day) – EF2R

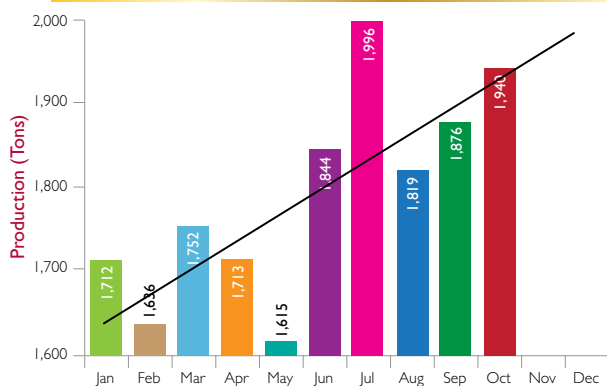


Fig. 2) Energy Consumption (KWH/t) – EF2R

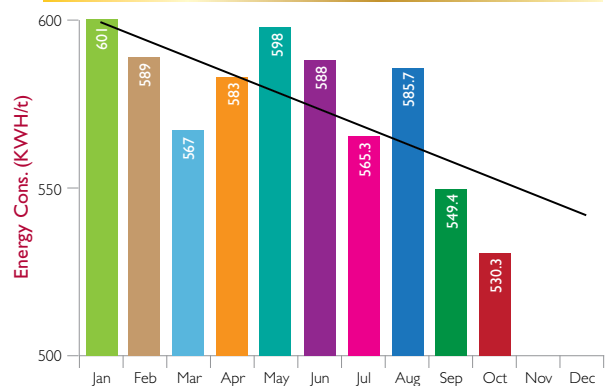


Fig. 3) Oxygen Consumption (Nm³/t) – EF2R

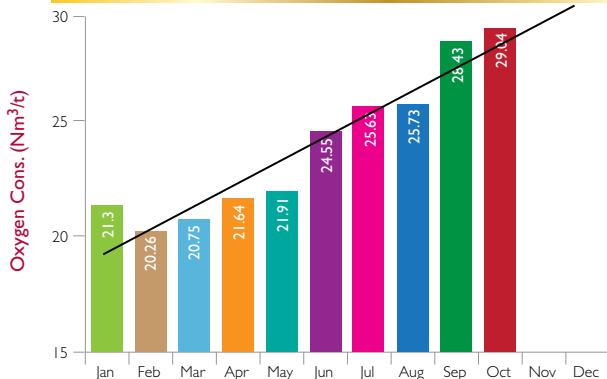
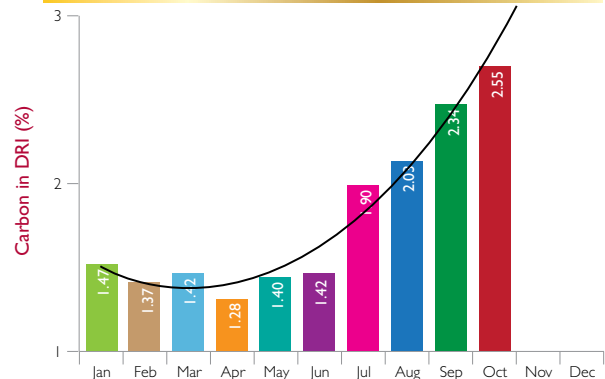


Fig. 4) Percentage of Carbon in DRI



HSE Department

Qatar Steel Company aspires to be the first name in the region's steel industry. Developments and initiatives taken by Qatar Steel to reduce atmospheric emissions illustrate the Company's proactive steps towards eco-friendly processes and environmental protection. Qatar Steel has an emergency response contingency policy and plan in place. It is also committed towards ensuring the occupational health and safety of their employees.

Qatar Steel Company is now associated with the World Steel Association and has become the Climate Action Member of it. Qatar Steel has been actively participating in the World Steel CO₂ Data Collection Programme and has been appreciated for the same by the World Steel Association.

Workshop on Naturally Occurring Radioactive Material (NORM) & Management Guidelines

The Ministry of Environment (MoE) conducted a workshop on NORM in order to develop Management Guidelines on NORM for the State of Qatar. This was held from the 13th till the 15th of October 2009 at the MoE Office. Qatar Steel was represented by Mr. Yousef Rashid Al-Suwaidi and the main lectures were delivered by Dr. Khalid Mously, Dr. Khalid A. Aleissa of Saudi Aramco and Dr. Othab Al-Kinani of the MoE.

Mr. Yousef Al-Suwaidi presented the challenges and measures in Qatar Steel with regard to NORM. A draft proposal of the management guidelines was presented by Dr. Othab Al-Kinani for discussion.



Mr. Yousef Al-Suwaidi delivering the NORM presentation

worldsteel
ASSOCIATION



Qatar Steel Company

In recognition of your participation in the worldsteel CO₂ data collection programme 2008-2009.

Ian Christmas
Director General

Lakshmi Mittal
worldsteel Chairman