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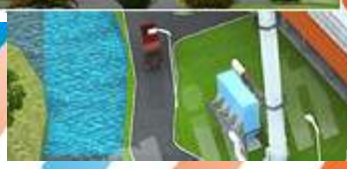

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ENVIRONMENT FRIENDLY STEEL

infocus/chn

The Importance of Induction Furnace Industries in the Context of Global warming

Kamal Aggarwal
Hon. Sec. General, AIIFA

The iron and steel sector are a strategically important sector for the developing economy of India as it contributes **2% to the overall national GDP**. Also, this sector provides abundant opportunities for employment in India. India has already been the **2nd largest producer** of steel in the world. At present, the per capita steel consumption in India is still quite low i.e., around **68kg** as compared to the global average of **208 kg**. This shows that the country has to go in a long way to achieve a reasonable level of steel consumption. To reach per capita consumption of around **160 kg**, India has set an ambitious target of steelmaking capacity of **300 MT** by year **2030-31**

How far the question is concerned regarding Indian steel industry, it is structured in between three broad categories based on route wise production viz. BF-BOF, EAF and IF. BF-BOF route producers have large integrated steel making facilities which utilize iron ore and coking coal for production of steel. Unlike other large steel producers, the Indian steel industry is also characterized by the presence of a large number of small and medium steel producers who utilize sponge iron, melting scrap and non-coking coal (EAF/IF route) for steelmaking. There are **285 sponge iron producers** that use iron ore/ pellets and non-coking coal/gas providing feedstock for steel production; **39 electric arc furnaces & 858 induction furnaces** that use sponge iron and/or melting scrap to produce semi-finished steel and **1020 re-rollers** that rolls out semi-finished steel into finished steel products for consumer end use.

Induction Furnace industry has been contributing very significantly in the overall production of steel in the country, both in quantitative terms and as percentage of total steel production. Crude steel production through induction Furnace route has been continuously increasing from about **4.3 MT (16%)** to **22.6 MT (32%)** in **2010-11** and finally to **33 MT (30%)** in **2019-20**. Contribution of the Induction Furnace sector is likely to be significant in years to come in making available quality steel at competitive price to the consumers in different geographical locations in the country.

Since, it has a number of advantages such as **low investment cost**, **land intensive** as compared to integrated steel producer, **agility to produce various profiles** of steel within a short time span, **low operating Cost**, providing greater **opportunity of employment** in rural areas to prevent un-necessary migration of people towards Metropolitan city etc., Moreover, the main advantage of the induction furnace is **a clean, energy-efficient and well-controllable melting process compared to most other means of metal melting**. Only air pollution occurs and **no water or noise pollution takes place** in induction furnace, therefore, a special thrust is required to be given to look in to the barriers

which are coming on the way for increasing the production from this sector.

As we are aware that, there are lot of advantage associated with using of steel melting scrap. For example; considering recycling of **one tonne of steel scrap** saves not only **1.2 tonnes** of **Iron Ore**, **0.7 tonnes of Coal, 0.5 tonnes of lime stone, 287 litres of Oil, 2.3 cubic meters of Landfill, 40% less Water and overall, 58% Reduction in GHG emission** but also saves the **earth** from **being emptied** of its **precious non replenish able resources**. Hence steel scrap is necessary for producing quality steel in present scenario.

It is estimated that present demand for scrap is **around 30MT** which translates to roughly **20-25% scrap** usage overall. Since about **55% steel** is produced through **EAF and IF,** this usage is low. The scrap usage is low due to no availability of quality scrap and high-power tariff because of which some hot metal is used in EAF also. The scrap requirement as worked out is **65MT in 2030-31.** This will work out to 22% scrap usage overall. Scrap arising within steel industry (domestic scrap) could be around **25MT**. Hence, **40MT** has to be made available through **collection and recycling and imports**.

Now average yearly import during the last five years is **about 6MT**. We may assume that this will be double in 10 years to 12MT. Main sources of import are USA, Japan, France, Germany, Netherlands, UK and Russia. Total net export by these countries was about 45MT in 2018 (source: www.worldsteel.org). There is little possibility of scrap availability from these countries going up since they have reached certain level of development. At best it may increase to 50MT by 2030.

Further, India is also a signatory to Paris agreement and therefore it is essential to increase the proportion of scrap-based steelmaking to reduce greenhouse gas emission. As per NSP assumption, scrap usage will be around 12% only. With availability of domestic scrap expected to be 25MT and if import is considered at 12MT, 28MT has to be internally made available by recycling. This will be a combination of Industrial scrap (Fabrication sites, Engineering & other industries) and obsolete scrap (industrial machinery, domestic appliances, ship breaking, end of life automobiles, home appliances etc.)

In this context, it may be noted that, the use of unprocessed and dirty scrap in induction Furnace resulting in lower yield and poor quality of steel. Indian specification number IS: 2549-1994 read with amendments issued in August 2008 and April, 2011 deals with classification of processed scrap. As per the specification, scrap should be free of dirt, non-ferrous metals and foreign materials of any kind and should not have excessive rust or corrosion. It should be free from alloys, pressurised gas, fuel and other sealed containers, explosives, shells, bombs and dangerously inflammable material.

Scrap is classified as heavy melting scrap, cutting of rolled products, crop end of semi-finished steel, clean shovable, silicon clippings, shredded scrap, bundle scrap and turnings and borings, depending on type of material, presence of coated steel and silicon steel if any etc., All the above types are further classified depending on size, density, type of pressing etc.,

Specifications have also been issued by Institute of scrap recycling industries and European Ferrous recovery and recycling federation. It is therefore necessary for recyclers to set up proper scrap recycling plants so that scrap of proper size and quality is available for steel making.

Since, steel production is a major industrial process sourcing carbon dioxide emission. In steel production process, iron is melted and refined to lower its carbon content. Major and Main steel industries produce steel in bulk tonnage by the process Coke Oven Blast Furnace - Basic Oxygen route where oxygen is combined with the carbon coming from molten pig iron creating carbon dioxide. On an average, 1.9 tonnes of CO2 are emitted for every tonne of steel produced.

Emission Produced & Discharge Status from Steel Making Units	
BF- BOF Route	2.3 tonnes of CO2 per tonne of steel produced
DRI with Gas as Input	1.1 tonnes
Electric Arc Furnace	Almost 0.4 tonnes if Electricity comes from Zero “C” source
Induction Furnace	Produces Almost Nil

However, steel produced from electric induction furnaces in greener ways by scrap melting creates opportunities for making more efficient products, equipment’s, structures for different consuming sectors, with smaller ecological footprints in most cost-effective ways. Steel is not only recyclable but it also dissolves in high heat to produce high-quality steel. The iron and steel industry is responsible for 11% of global carbon dioxide (CO2) emissions and will need to change rapidly to align with the world’s climate goals

Steel production from induction furnace saves about 62% of the energy compared to the conventional steel making units significantly reducing carbon dioxide emissions. Induction furnace steel makers in India pay attention to the entire life cycle starting from sourcing clean raw materials, production of steel in cleaner ways, dispatching products to customer, using steel products after end of life right up to recycling and re-melting to form new steel. Because of such cleaner eco-friendly process without carbon addition during melting, there is no possibility of emission of any harmful gases which are generated from other steel making process like BF+BOF and even EAF where graphite electrodes used for arcing and supply carbon in melt as well as lancing oxygen.

Further, Electricity is an important input in EAF and IF. For electric steel making to compete with oxygen steelmaking and to ensure that scrap usage is increased in electric steel making, electricity tariff has to be reasonable. Government should encourage and support to setup more Induction furnace units because any such efforts have a great bearing on the conservations of national resources and also direct impact on reduction of CO2 emissions, which will bring down **Global warming** and save the **Mother Earth.**

ROUTE WISE, REGION WISE, STATE WISE NUMBER OF UNITS DURING 2019-20				
State / UT	**No. of Units**			
EASTERN REGION				
	BOF	**EAF**	**IF**	**TOTAL**
Arunachal Pradesh	0	0	3	3
Assam	0	0	6	6
Bihar	0	0	15	15
Jharkhand	3	1	41	45
Meghalaya	0	0	5	5
Odisha	4	7	42	53
Tripura	0	0	1	1
West Bengal	2	4	36	42
Eastern Regions Total	**9**	**12**	**149**	**170**
WESTERN REGION				
Chhattisgarh	1	6	72	79
Dadra And Nagar Haveli	0	0	19	19
Daman And Diu	0	0	3	3
Goa	0	0	12	12
Gujarat	0	3	56	59
Madhya Pradesh	0	0	9	9
Maharashtra	0	9	46	55
Western Region Total	**1**	**18**	**46**	**236**
NORTHERN REGION				
Delhi	0	0	2	2
Haryana	0	3	7	10
Himachal Pradesh	0	0	25	25
Jammu And Kashmir	0	0	8	8
Punjab	0	4	115	119
Rajasthan	0	0	36	36
Uttar Pradesh	0	0	46	46
Uttarakhand	0	0	42	42
Northern Region Total	**0**	**7**	**281**	**288**
SOUTHERN REGION				
Andhra Pradesh	2	0	25	27
Karnataka	4	1	24	29
Kerala	0	0	29	29
Puducherry	0	0	10	10
Tamil Nadu	1	1	97	99
Telangana	0	0	26	26
Southern Region Total	**7**	**2**	**211**	**220**
All Region Total	**17**	**39**	**858**	**914**

Route Wise, Region Wise, State Wise Crude Steel Production During 2019-20 ('000 tonnes)				
State/ UT	Total Production			
EASTERN REGION				
	BOF	**EAF**	**IF**	**TOTAL**
Arunachal Pradesh	0	0	29	29
Assam	0	0	67	67
Bihar	0	0	540	540
Jharkhand	14792	617	1799	17209
Meghalaya	0	0	92	92
Odisha	9720	8131	2402	20253
Tripura	0	0	12	12
West Bengal	4272	313	3179	7764
Eastern Region Total	**28784**	**9062**	**8120**	**45965**
WESTERN REGION				
Chhattisgarh	4497	3605	5432	13534
Dadra And Nagar Haveli	0	0	285	285
Daman And Diu	0	0	46	46
Goa	0	0	423	423
Gujarat	0	7198	1482	8680
Madhya Pradesh	0	0	438	438
Maharashtra	0	5105	3155	8260
Western Region Total	**4497**	**18908**	**11262**	**31667**
NORTHERN REGION				
Delhi	0	0	12	12
Haryana	0	518	78	596
Himachal Pradesh	0	0	864	864
Jammu And Kashmir	0	0	114	114
Punjab	0	338	2971	3310
Rajasthan	0	0	749	3310
Uttar Pradesh	0	0	1198	1198
Uttarakhand	0	0	1077	1077
Northern Region Total	**0**	**856**	**9063**	**7919**
SOUTHERN REGION				
Andhra Pradesh	5001	0	1538	6539
Karnataka	9656	2435	784	12875
Kerala	0	0	304	304
Puducherry	0	0	210	210
Tamil Nadu	635	106	1764	2505
Telangana	0	0	1154	1154
Southern Region Total	**15292**	**2541**	**5953**	**23586**
All Region Total	**48573**	**28367**	**32198**	**109137**

STATE-WISE CAPACITY & PRODUCTION DURING 2019-20				
SEGMENT: INDUCTION FURNACE			**Capacity & Production '000 tonnes**	
Region	**State/UT**	**No. of Working Units**	**Working Capacity**	**Production**
WESTERN	Chhattisgarh	72	6458	5432
	Dadra And Nagar Haveli	19	296	285
	Daman And Diu	3	46	46
	Goa	12	481	423
	Gujarat	56	2454	1482
	Madhya Pradesh	9	553	438
	Maharashtra	46	4331	3155
	Region total	**217**	**14619**	**11262**
EASTERN	Arunachal Pradesh	3	125	29
	Assam	6	131	67
	Bihar	15	803	540
	Jharkhand	41	2230	1799
	Meghalaya	5	181	92
	Odisha	42	3088	2402
	Tripura	1	30	12
	West Bengal	36	4654	3179
	Region Total	**149**	**11242**	**8120**
NORTHERN	Delhi	2	16	12
	Haryana	7	106	78
	Himachal Pradesh	25	1139	864
	Jammu And Kashmir	8	189	114
	Punjab	115	4162	2971
	Rajasthan	36	1176	749
	Uttar Pradesh	46	1617	1198
	Uttarakhand	42	1559	1077
	Region Total	**281**	**9964**	**7063**
SOUTHERN	Andhra Pradesh	25	1791	1538
	Karnataka	24	2031	784
	Kerala	29	480	304
	Puducherry	10	340	210
	Tamil Nadu	97	2586	1764
	Telangana	26	1443	1154
	Region Total	**211**	**8671**	**5753**
	GRAND TOTAL	**858**	**44496**	**32198**

AIIFA/036/2021-22 Date: 31/01/2022

To,
Shri Sanjeev Khirwar
Chairperson
Commission for Air Quality Management
Delhi Pollution Control Committee
4th & 5th Floor, ISBT Building
Kashmere Gate, Delhi-110006

Sub: Request to withdraw restriction imposed on the units (not running on PNG) at Bhiwadi, Rajasthan

Dear Sir,

This has reference to the **Direction no 49** issued by Commission forAir Quality Management in National Capital Region and adjoining areas Act 2021 dated 15thDecember, 2021, granting relaxation in conditions imposed on various industries operated in Delhi NCR which have still not shifted to PNG/cleaner fuels in view of the technical requirement.

Kindly refer to, Point No. 12, sub para (iii) which states that Industries related to textiles, garments and apparels including dyeing processes and **other set of industries** not falling in any of the categories from (i) to (ii) above, shall also be permitted to schedule their operations (without any restrictions on number of hours per day) only for 5 days per week.

In this context, we would like to bring to your kind notice that Rolling and Re-Rolling Mills operated in Bhiwadi, Rajasthan only for one shift at 50% capacity as per the directive issued in view of Pandemic situation and it is kept under maintenance for the rest hour. It may be noted that around 250 workers are engaged in each and every steel unit in Bhiwadi and out of which only 50% worker works per day in the unit. However, the expenses like salary and wages, Fixed Demand Charges for electricity and other charges etc., which is growing up day to day. In order to meet out these expenses, it is necessary for the entrepreneur of these plants to run their plant at full capacity.

Further, it may be noted that In Bhiwadi, Rajasthan, the use of Furnace oil/LSHS as fuel was banned w.e.f. Oct.2017 and presently most of the units are operated on pulverised coal which is a proven technology as specified by UNDP/GEF Project (steel). Hence, it is not possible for the Rolling and Re-Rolling units operated in Bhiwadi Cluster to switch over to PNG fuel overnight or within a short span of time because the Burners, pipe lines, combustion blowers, Reheating furnaces, etc., installed in these mills are designed to operate on coal and these cannot be operated by using PNG as PNG operated Burners, pipe lines, combustion blowers, re-heating furnaces, etc are totally different & the Steel Rolling Units will need to replace existing Burners, pipe

lines, combustion blowers, re-heating furnaces, etc with new PNG/GAS operated equipment and technology which will involve huge investment running into several Crores of Rupees depending upon the capacity of plant for installation of new Gas operated equipment's.

However, The Steel Rolling Units are also very concerned about the environment & have already upgraded technology to overcome the environmental problem in NCR & already they have installed most efficient Air Pollution Control devices likes Wet Scrubbers/ De- Sulphuration Equipment's in their unit to control the Air Emission. By installation of these Air Pollution Control equipment's the smoke emission from the stack/Chimney is non-visible & negligent.

In view of the facts stated above, we would like to request you kindly issue a directive to concerned authority to withdraw the restriction imposed on these units (not running on PNG) and shall be permitted to operate for 24x7 Hrs so that they may be able to contribute their contribution in National GDP.

A delegation from AIIFA, would like to meet with you to draw your attention to hardships being faced by the steel entrepreneurs of Bhiwadi. We will be highly obliged if you very kindly give us an appointment for meeting with you at your office on a suitable date and time as per your availability.

We hope, our request is duly considered by you

Thanks & Regards

Kamal Aggarwal
Hon. Sec. General

The Role of Secondary Steel Sector in achieving $5 trillion economy by 2024

S.P.Singh
Dy Director (T), NISST

INTRODUCTION

Steel sector has been a major contributor to India's manufacturing output. Steel sector has contributed significantly towards India's economic development, with slightly more than two percent of its GDP. India is the world's second-largest producer of crude steel. In FY21, the production of crude steel and finished steel stood at 102.49 MT and 94.66 MT, respectively. In FY22, crude steel production in India is estimated to increase appreciably, driven by rising demand. Steel industry and its associated mining and metallurgy sectors have seen major investments and developments in the recent past.

The National Steel Policy, 2017 envisage 300 million tonnes of production capacity by 2030-31. Government is making efforts to increase per capita consumption of steel to 158 kg/per capita by 2030-31. The growth in the Indian steel sector has been driven by domestic availability of raw materials such as iron ore and cost-effective labour. Huge scope for growth is offered by India's comparatively low per capita steel consumption and the expected rise in consumption due to increased infrastructure construction and the thriving automobile and railways sectors. The steel sector has always strived for continuous modernisation of older plants and up-gradation to higher energy efficiency levels.

Indian steel industry is classified mainly into two categories - main producers and secondary producers. While main producers are large sector plants producing more than one million tons of steel per annum, the plants in secondary steel sector are mainly in MSME category.

SECONDARY STEEL SECTOR :

Secondary steel sector comprises of various segment industries (sub sectors) producing Sponge iron, Electric arc (EAFs), Induction Furnace (IF) units, Re-rolling mills, Cold rolling mills, Galvanizing units, Wire drawing units, Tinplate producers, etc., with annual production capacity less than 1 million tons of crude steel. Each of the sub-sectors is quite fragmented but very much interrelated with one another, and together they meet the country's demand for large variety of value added steel products. These units produce crude steel mainly from steel scrap and/or sponge iron as input material. Major products of this sector are TMT bars, light and medium structural sections which are used mostly in housing, construction and infrastructure sectors. Units are generally small in size and scale of operation, as compared to the integrated steel plants, but able to cater to retail customers due to proximity to the consumer bases.

CONTRIBUTION OF SECONDARY STEEL SECTOR :

Indian secondary steel sector produced 38.5 million tons of crude steel in 2020-21 i.e 37% of total production of 103.54 million ton. Contribution to total finished steel production in 2020-21 of this sector was 40.88 million ton i.e. 42% of total national finished steel production of 96.20 million ton. In the long products' segment, contribution of this sector is approximately 55% in FY2021. It is also contributing significantly in the overall production of alloy steel, special steel and stainless steels. Secondary steel sector employs about 400,000 people, both directly and indirectly.

STRENGTHS OF SECONDARY STEEL SECTOR:

The Secondary steel sector reaches out to millions of people in urban & rural areas and hence, is a major force in meeting steel demand. The sector has created it's niche in producing long products and special sections. Lower capital investment as compared to primary sector, lower overall environmental impacts, lower overheads, higher variety of sections and proximity to customers are some of it's key strengths of this sector. The sector has an enormous potential for employment generation in the country. Secondary sector has an edge over primary sector because of lower capital & land requirements and distinguished capability to produce very special sections & customer base products. The sector is bound to play a major role in actualizing the vision of growth in steel production capacity of 300 million tons by 2030 set by Ministry of Steel, Government of India. Some of strength areas of secondary steel sector include the following:

- Flexibility to use variety of input materials
- Recycle scrap and other metallic wastes. Large user of iron ore fines/dust.
- Counters logistic bottlenecks
- Close to customers' door steps and caters retail customers
- Requires lesser land lock, thereby protects forest area and plantation
- Manufacturing capability of unique products, small sized products, need based tailor-made products, agricultural appliances, etc.
- Lesser capital requirement
- Generates local area employment and creates other business opportunities.
- Enhances entrepreneurs' base.
- Lesser damage to environment, lower water requirement and saves ground water.

THE ROLE OF SECONDARY STEEL SECTOR IN ACHIEVING $5 TRILLION ECONOMY BY 2024

The secondary Steel sector is treading on a growth path and is expected to play a major role in steel production of India in the light of trends towards increased usage of scrap based steel production. Existing units in this sector are being modernized/ expanded. A large number of new production capacities are being added to meet the growing

demand. The secondary sector has enormously improved it's performance in last two decades with regard to energy usage due to continuous institutional efforts and also interventions through energy efficiency projects funded by government for penetration of energy efficient technologies in this sector. The sector is installing secondary metallurgy equipments like LRFs, VDs to produce quality products. The sector has largely shifted from ingot casting to continuous casting of billets which has helped to get rid of many quality problems. The industry has started using cleaner fuels like PNG & producer gas which give better surface finish. Many tandem mills have come up in the sector, which not only help to increase productivity but also help in producing better quality products.

Government of India's initiatives like Make in India, Atam Nirbhar bharat, Vocal for Local, specialty steel production-linked incentive (PLI) scheme, Pradhan Mantri Awas Yojna, Developing Smart Cities, improved road and rail connectivity by building highways, bridges and dedicated freight and superfast rail corridors etc are few of the opportunities for this sector to perform better and smarter. “With the introduction of scrap recycling policy in the future, the contribution from secondary steel will further rise.

The sector is also getting Institutional Support to improve it's performance. National Institute of secondary steel technology (NISST) set up by Government of India is catering to technological development of the Secondary steel sector. The institute is serving the technological needs of the sector through training programmes/technical seminars, Process & Energy audits, technical consultancy and R&D projects.

Secondary Steel Sector is expected to receive more attention going forward, owing to changing National & International scenario with respect to shortage of quality raw materials like iron ore & coal, stricter environment laws for mining industry, shortage of water and non- agricultural land, higher capital costs for integrated steel production and likely boom in local availability of steel scrap with new transport policy of India. As increased usage of recyclable scrap for steel making and hence, increased role of Secondary sector in contributing to steel scenario is beyond doubt. India being a developing country and focusing on infrastructure developments, this sector is poised for an accelerated growth. However, the sector needs to duly address issues like quality and efficiency for competitive advantage in global market. The sector needs to increase production of value-added steel in India to reduce import.

The production target for the secondary steel sector by 2025 is around 70-72 MT pa, comprising of arc furnace and induction furnace along with alloy and stainless steel producers under the category of secondary producers. Looking at the current scenario of around 40MT production by secondary producers through the above mentioned production, the expansion to be planned has to ensure doubling the production to 70 MT by 2024. As per estimates Secondary Steel Sector is expected to contribute about 35 – 40% of the crude steel capacity & production in 2030-31.

Manufacturing in India is driven by the key sectors such as Automobiles & Capital Goods and Steel is a key component for these sectors. There is enormous scope for increasing steel consumption in almost all sectors, e.g., infrastructure, automobiles, packaging, irrigation and water supply, engineering and capital goods, real estate and transportation.

As the steel sector in India contributes nearly two per cent of the country's gross domestic product (GDP). The Indian secondary steel industry is poised to play an important role increasing the GDP of India. As per estimates Secondary Steel Sector is expected to contribute about 35 – 40% of the crude steel capacity & production in 2030-31. Demand for pig iron for merchant use, such as for castings and supplementary metallic in the electric arc or induction furnaces, is projected to increase to 17 MT by 2030-31. Similarly, demand for sponge iron is projected to increase to 80 MT by 2030-31. It is projected that the sponge iron capacity may increase to 114 MT by 2030-31 with around 30% share of gas based capacities under increased environmental considerations and long term availability of gas. Considering the above facts it is expected that Secondary Steel Sector is likely to play a great role in achieving $5 trillion economy by 2024.

Steel Sector News

India: Crude steel capacity to rise, exports see pick-up

India's crude steel production will likely increase in February m-o-m compared to the 10.4 million tonnes (worldsteel data) seen in Dec'21, since JSW Steel has commissioned its 5-million tonnes per annum (mtpa) Dolvi plant. This move has injected some amount into India's total crude steel production tally. Dolvi's production will be gradually ramped up to touch its optimal capacity of 5 mtpa by end of the year. This would mean at least an additional 300,000-350000 tonnes of crude steel production in India going forward.

NMDC has also started production in the coke oven unit at its Nagarnar Steel Plant (NSP). Going forward, this plant too will add some more crude steel to India's total output. Production is expected to go onstream in 2022 itself since Mecon has been appointed to commission the plant.

Consumption: The fourth quarter (January-March) is usually the best period in terms of domestic demand since weather supports construction activities.

Also, government infrastructure projects have deadlines to meet towards the fiscal year-end, which puts a high demand on construction steel.

Where flats are concerned, there is demand from the automotive sector. The chip shortage is still continuing but has abated to an extent, auto makers inform. As a result, vehicle production is slated to improve in February.

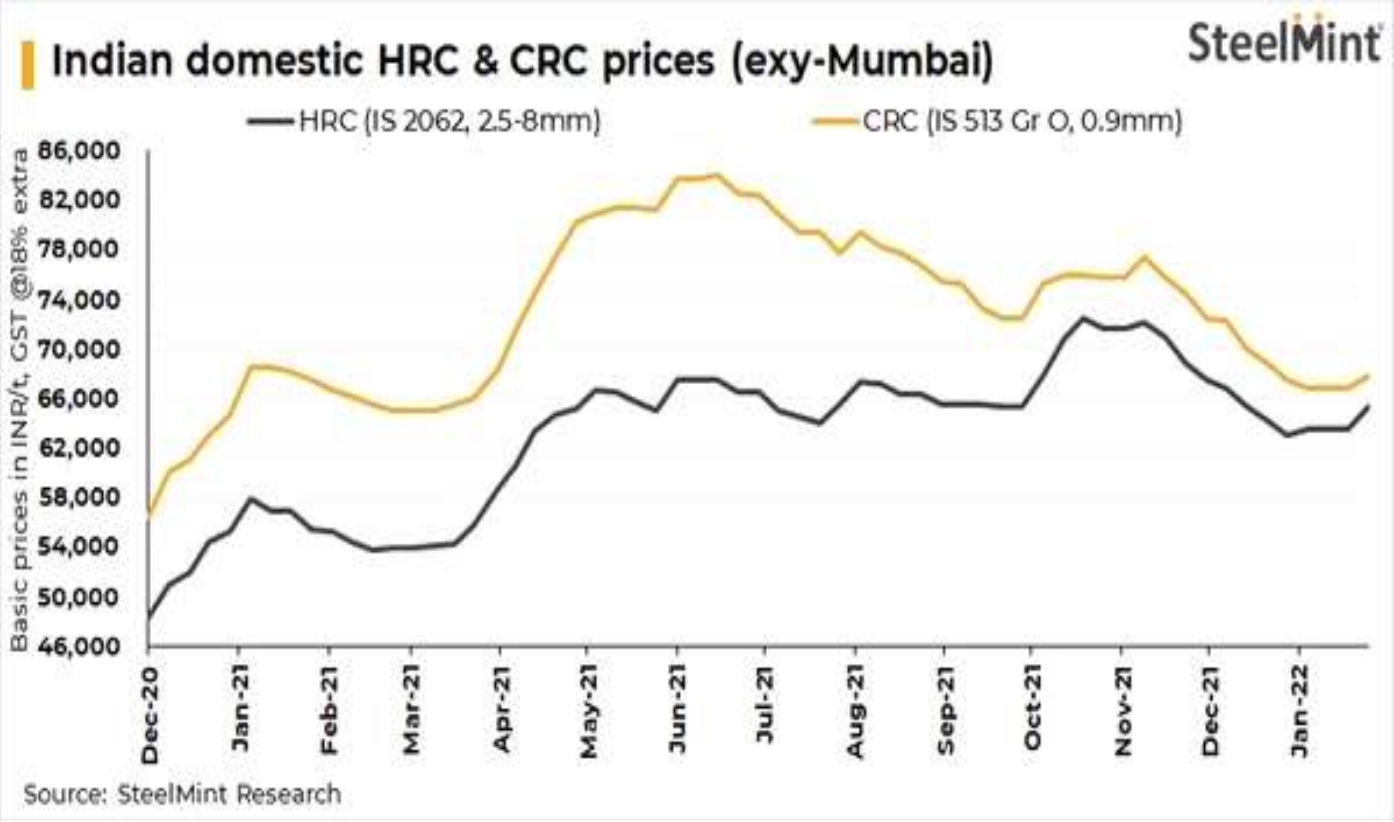
Exports: Mills have turned rather active starting the first week of January. Around 190,000 tonnes of export bookings were sealed recently, mainly propelled by restocking demand from China ahead of the Lunar New Year holidays.

Shipments for Europe, Egypt and Turkey were confirmed in the 20-odd days. Indian mills may see demand from Vietnam buyers who had been unable to purchase till early January because of Covid-related curbs and were short of inventory.

The spiralling energy prices in Europe are forcing many mills there to temporarily reduce production. In such a scenario, importing billets is a cheaper option. The prospects of a Russia-Ukraine face-off will also impact natural gas supply in EU. Russia supplies 40% of natural gas to EU.

Prices: There has been an increase in prices after a correction of 6-7% in Dec'21. For instance, trade-level HRC prices, which had been at INR 67,000/tonne-levels in Nov'21, dropped to INR 62,000/t in Dec'21 but rebounded to INR 63,000-64,000/t levels in Jan'22.

If exports rebound, then there is further room for prices to rise in both longs and flats.



The former has increased more sharply because of two reasons. First, demand for billets is high since European mills, hit by skyrocketing gas prices, are finding it cheaper to import billets rather than melting themselves, which is an energy-intensive affair. Secondly, sponge players have been hit by high thermal coal prices and supply tightness.

As a result, the gap between longs and flats has narrowed to INR 6,000-7000/t from Dec'21 levels of over INR 10,000/t.

Meanwhile, mills have already raised prices list prices by INR 500-700/t.

Inventory: With exports picking up, most mills are booked well till February. Therefore, mills are comfortably placed in terms of inventory liquidation even though March bookings have not begun yet.

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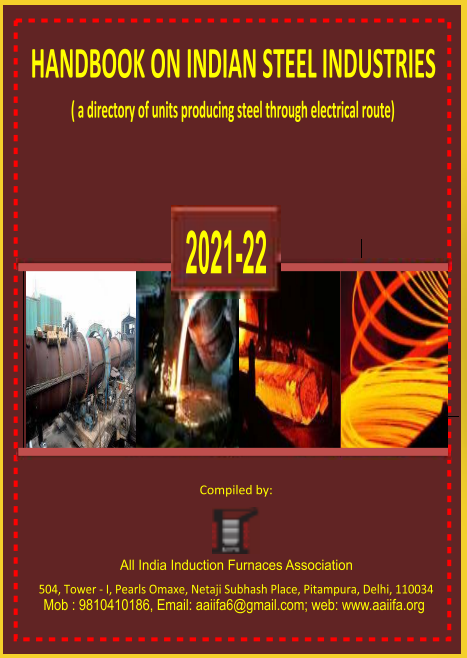

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