ALL INDIA INDUCTION FURNACES ASSOCIATION

AIIFA

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What's Inside

AIIFA SECRETARIAT:

504, Pearls Omaxe, Tower-1, Netaji Subhash Place, Pitampura,
Delhi-110034 INDIA

Tel: 011-2735 1346/1347

Mobile : 9810410186

Email: aaiifa6@gmail.com

Website: www.aiifa.org

Facebook A/c:
aiifa1987 or 9810410186

twitter A/c :
aiifa1987@gmail.com

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G.T. ROAD, DHANDARI KHURD, LUDHIANA - 141 010 (INDIA)
Ph.: (0) 0161-2510714, 2510715 Fax. : 91-161-2510716
E-mail : duttason_ers@hotmail.com, duttason@outlook.com
Website : www.duttason.com Mobile + 91 9814023608

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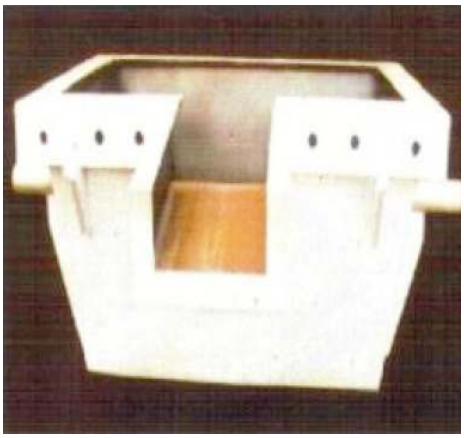

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Charging Bucket

Ladle Preheater

Vaccume Degassing Vessel

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SHRADHA THERMO SENSORS
Gat No. 95, Alandi-Markal Road, A/p Solu, Taluka Khed, Dist. Pune – 412 105
Email: shradhathermosensors@gmail.com, instrument@shradhagroup.com
purchase@shradhagroup.com, account@shradhagroup.com
Mobile: 9623555655, 9822883536

www. shraddhagroup.com www.shradhathermosensors.com

President Message

Dear Friends and Colleagues,

I am humbled, honored and privileged to assume the role of President for the second term (2017-2019) of the All India Induction Furnaces Association. I am deeply grateful to all the past presidents for their leadership and outstanding contributions to AIIFA during their presidency, and the members of the Executive Committee and National Council for their unending cooperation. My special thanks to Mr. Kamal Aggarwal, Hon. Secretary General, for his hard work and sparing his valuable time in looking after the day to day functioning of the AIIFA. I look forward to their continuing support and suggestions towards fulfilling the aims of AIIFA.

Last two years have been a great experience and satisfying as AIIFA achieved many mile stones which are and will be very helpful for the Induction furnace industry in India. Now AIIFA is one of the active members in the following committees constituted by various Ministries/Govt. organization listed below:

Bureau of Indian Standards 9 BIS) for long steel and sponge iron.

National Institute of Secondary Steel Technology

Ministry of Steel, GOI

Joint Plant Committee (JPC)

AIIFA is also member of FICCI, MRAI, PHD Chamber of Commerce and Industry.

Besides this our association is making representation to various departments on problems and issues arising in routine and many of them have been solved by the government in due course.

We have tried our best to make Induction Furnace Newsletter more interesting by regularly publishing technical articles of interest besides regular features of news, notifications and other information related to industry etc. More suggestions from members and even write up for newsletter welcomed.

With the implementation of GST w.e.f 1st, July,2017, the challenges are more and there is lot of confusion about various provisions in the GST Laws. We are trying our best to write to the concerned ministry as and when an issue is reported or noticed by me. Already we have made many representations in this regard.

My humble request to all the members to come forward with their suggestions or problems in any matter of whatsoever nature and write to the AIIFA so that a proper representation is made to concerned government department.

With the continued support of the national council and members of AIIFA, I am confident that we will be steadfast in addressing the pressing challenges to induction furnace industry, and in the next two years our accomplishments will be many.

I am proud to be given this wonderful opportunity, and I will continue to strive hard to address the problems being faced by induction furnace industry.

Thanking you once again.

With Best Regards,

Sandeep Jain

IF Units as Secondary Steel Producer & Its Primary Raw materials

Srikumar Chakraborty
Metallurgical Consultant,
Email:srichakraborty41@rediffmail.com

Introduction: In the increasingly global competitiveness, mini steel plants as secondary steel producing sectors for mild steel, stainless steel, various other alloy tool and special steels allover the world have become more, not less, important in every country because of contribution to their national economy. Inspite of the global economic decline within several key market segments, including automotive, engineering and manufacturing sectors, most of the secondary steel sectors are trying to manage their units in maintaining performance level satisfying customers. This situation has been further exacerbated by the fact that the secondary steel producers are putting emphasis on development of new grade and product exploring new application areas in different segments availing opportunities in domestic as well as export market.

Steel, as the modern material of choice and most recycled material, is undoubtedly the indispensable material and backbone of manufacturing in modern technology driven society encompassing a class of over 2500 different grades currently produced and used. Because of wide variety of properties leading to an even wider spread of uses particularly in alloy & special steels, enough scope exists in improving product quality and properties like micro and macro structure, grain size, inclusion control, mechanical properties through heat treatment meeting challenges for continuous product and process development ensuring the competitive edge.

Steel production in India is done by primary steel making units by secondary steel sectors. In steel-making, impurities such as nitrogen, silicon, phosphorus, sulfur and excess carbon are removed from the raw iron, and alloying elements such as manganese, nickel, chromium and vanadium are added to produce different grades of steel. Removal of dissolved gases such as nitrogen and oxygen, and entrained impurities (termed "inclusions") in the steel is also important

In the primary steel-making process, carbon-rich molten pig iron is made into steel with the help of blown oxygen through molten pig iron at supersonic jet which lowers the carbon content of the alloy and changes it into steel as basic process due to the chemical nature of the refractories —calcium oxide and magnesium oxide, the steel making vessel lining to withstand the high temperature and corrosive nature of the molten metal and slag in the vessel. The slag chemistry of the process is also controlled to ensure that impurities such as silicon and phosphorus are removed from the metal.

In the secondary sector, steel is produced by melting steel scrap and or scrap substitute by EAF or IF. Secondary refining in the secondary sectors is mostly done through VD or LRF or AOD prior to ingot casting or continuous casting. The purposes of secondary refining are temperature homogenization or adjustment, chemical adjustments, alloy addition at precise level, inclusion control, degassing, and others.

The liberalization of industrial policy and other initiatives taken by the Government of India, have given a definite impetus for entry, participation and growth of the private sector, particularly secondary steel units, in the steel industry who are trying to modernize/ develop to produce cost-effective quality steel products to meet the growing demand of the country and successfully entering in the export market.

The intent of producers is to identify specific market opportunities that provide a more complete, overall solution to the specific customer's needs by developing a comprehensive situation analysis and strategic directions that cover all market and competitive factors, as well as the producers' position within these markets anticipating future success. However, most importantly, the steel producers should effectively implement the strategic direction consistently measuring performance against the

target stated in the plan which will enable the organization to both meet its objectives, as well as to react to new business opportunities.

Induction Furnace in Secondary Steel Sector - IF melting has emerged as key driver for steel production in secondary steel making units in India producing more than 30% steel consisting increased share due to key economic benefits over other processes. Almost all secondary steel making units have started adopting induction furnaces. Crude steel in the secondary sector is cast into steel ignots for sale to re-rolling mills, or in some cases, directly cast and rolled/ forged or concast into finished steel products. In this sector, the basis of competition has shifted more and more to the creation and assimilation of growing knowledge of entire involved personnel of the production unit in further developing processing standards to perform better because the competitive advantage has opened up many more new challenges in all the sphere of activities.

In view of this situation in the market, McKinsey Global Institute (MGI) has suggested all the production and manufacturing units should set their goals very deliberately and act accordingly keeping an eye on the current and future development considering Quality & Cost as Hallmarks in most forward-looking, dynamic, and challenging ways. It is felt that process technology of the secondary steel sectors can be instrumental in unlocking profitability. The steel making in induction furnace and ingot production or continuous casting either as batch or sequence can benefit from improved productivity and quality across a broad throughput range using the latest development of secondary refining processes to minimize the unwanted and undesirable non-metallic or trapped gas inclusions or minimization of defects or any harmful contaminants in the final product.

The challenge to the units is to meet market demand for exceptional end-product quality at optimum cost and high productivity, both of which are influenced by strict adherence of process standards ensuring technical discipline to avoid any quality degradations which are costly for producers . The popularity of induction furnace steel making is growing, day by day, due to the advantages of following factors :

1. **Cost Factors – A.** Low Requirement of Electricity, **B.** Suitable for power supply may be through diesel driven generator or gas, **C.** Low investment cost on environment compatibility, **D.** More yield from scrap to liquid steel, **E.** Electrode cost is nil, **F.** Overall energy efficiency, normally, ranges from 55-75%, **G.** Melting of high alloyed steel possible, **H.** Less refractory cost, **I.** Capital cost and total investment cost comparatively low. It may be seen from the table below that compared to EAF conversion cost as worked out bench mark basis (WSA) on carbon steel (332.1$ in which scrap-59%, power-17%, electrode – 9% fe-alloy-4% labor - 4% roughly), IF cost comes out on this basis (keeping identical conditions as about 330$ (which excludes electrode cost and considers 30% of refractory cost of EAF).

Item S/unit	Factor	Unit	Unit Cost	Fixed	Variable	Total
Steel scrap	1.113	tonne	160.65	0.00	178.75	178.75
Steel scrap Transport	1.113	tonne	5.00	0.00	5.56	5.56
Pig iron/DRI	0.000	tonne	174.99	0.00	0.00	0.00
Pig iron/DRI transport	0.000	tonne	14.00	0.00	0.00	0.00
Industrial gases	17	cubic m	0.07	0.00	1.20	1.20
Ferroalloys	0.009	tonne	1383	0.00	12.61	12.61
Fluxes etc	0.031	tonne	118.00	0.00	3.67	3.67
Electrodes	0.005	tonne	5790	0.00	29.41	29.41
Refractories	0.009	tonne	685	0.00	6.24	6.24
Other costs	1	unit	10.12	2.55	7.65	10.20
Thermal energy	-0.396	GJ	4.35	0.00	-1.72	-1.72
Electricity	0.455	Mwh	127.00	8.66	49.08	57.74
Labour	0.349	hours	30.56	2.67	8.01	10.68
Capital charges	1	unit	17.77	17.77	0.00	17.77
Total				31.65	300.45	332.10

2. **Operational Factors** – **A.** Availability of full power instantaneously from power source, **B.** Total operational activities carried out in most simpler and flexible ways, **C.** Operational environment is clean compared to other melting process w.r.t to dust and sound, **D.** Reaching melting temperature of charge is less, heat loss is very less as bath is constantly covered during operation **E.** Cold charge can be used any amount, **F.** Tap time of liquid steel, normally, from 90-120 minutes, **G.** Ensure clean work place. **H.** Compact size in relation to melting rate. The time between tap and charge, the charging time, power delays etc. are items of utmost importance during operation to achieve maximum quality output at a low operational cost.

3. **Metallurgical Factors** – **A.** Homogeneity of liquid steel ensured by heavy strirring and Churning of entire melt, **B.** Less loss of chromium, **C.** Production of low and high alloyed steels including tool and die steels, stainless, high temperature resistant and various other grades with tight control over temperature and composition, **D.** Plain carbon and low alloy steel grades meant for construction industry particularly for TMT bars produced from induction furnace concast route as cheapest process maintaining quality and properties.

4. **Environmental Factors** – Noise level during melting is almost nil. Comparative Dust Emission figures - Different steel making processes emit dust(as studied):

Furnaces	Emission Rate
BOF (Bottom Blown)	5-10 Kg/T of Crude Steel
BOF(Top Blown)	15-20 Kg/T of Crude Steel
Electric Arc Furnace	2-5 Kg/T of Crude Steel
Induction Furnace	Almost Nil to 0.5 Kg/T of Crude Steel)

Basic Raw Material for Steel Making in IF– Steel scrap or substitute is the primary raw materials in making steel contribute to the tune of about 60% of total steel making cost. Scraps are, mostly, recycled material on the planet, more than all other materials combined retaining an extremely high overall recycling rate at about 88% level. The metallurgical properties of steel allow it to be recycled continually without any degradation in performance, and from one product to another. The sources for steel scrap are plentiful and classified into three main categories: home/ return scrap, prompt scrap and obsolete scrap.

Home scrap is the scrap that is produced from within the plant/unit and available within very short time. Prompt scrap is generated from manufacturing steel products and, also, available within shortest time. Obsolete scrap is scrap produced from steel products at the end of their lives and it may be decades before this scrap is available. Even while two out of every three tons of new steel are produced from old steel, it is still necessary to continue to use some quantities of virgin materials. This is true because many steel products remain in service as durable goods for decades at a time and demand for steel around the world continues to grow.

Scrap Re-cycling – Besides steel scrap, most of the steel industry has adopted processing of recycling scrap as by-products from mill scale, dust, slag and also recycling many consumer goods as can be seen by the 92.5 percent recycling rate of automobiles, the 90 percent recycling rate of appliances and the 72 percent recycling rate of steel packaging. Steel traders and dealers have given much importance and attention on scrap recycling allover the world to reduce any pollutant and removing unwanted suspended or mixed solid mass. However, advanced technology has helped to remove organic toxic pollutant, radio-active elements, lead and also specific element by various methods. Recovery of scraps from recycling depends on life of manufactured products normally considered as –

1. Automoble : 9 – 12 years
2. Railway Wagon/ Coatch es etc: 20-25 years
3. Ship Breaking: 30-35 years

Nominal available composition after recycling shows as –

Sl.	Areas	Fe %	C %	S %	Density (Av)
1	Rolling Mill/ Concast Shop/ Forging Units	99	0.4	0.025	1-1.5
2	Demolished Scrap	99	0.25	0.045	0.6-1.4
3	Shredded	95	0.5	0.045	0.9-1.1
4	Cryogenic Scrap	97	0.17	0.040	0.8
5	Cryogenic Scrap – Shredded at Low Temp	92	1.00	0.050	2.6
6	Packets of used Scrap – Category I	80	0.25	0.010	NA
7	Packets of used Scrap- Category-II	82	1.30	0.070	NA

The advantages of scrap availability as a relatively cheap and abundantly are exploited by IF units considering major charge material in the main categories as –

Return / Home scrap - Internal generation of non-conforming steel products/normal discards, process loss/ wastage or steel casting foundry as waste melted in IF. But improvement of process technology has significantly reduced such arising after introduction of secondary refining and continuous casting. In general, present finished product yield level has achieved as 80-85% against 60-65% till early 70s due to improvement in process technology.

Industrial Scrap – This category is generated in fabrication or construction units dealing steel products in the industries like automobiles, appliances, buildings, bridges, ships, cans, railroad cars, etc. after serving their useful life which accounts for approximately 48% of total scrap. IF units have taken major challenges in recycling scrap to maintain the quality of steel products minimize contamination with other metals. Potential residual element contamination may come from the recycling of automobiles and municipal scrap. However, recycled scrap, sometimes, pose problem in IF melting because high level of undesirable (trace) elements affect steel cleanliness.

Shredded Scrap - Substantial quantity of shredded scrap coming from dismantling of ship breaking industries for which chemical composition is mostly unknown or at least precisely not known. Trace elements (if not specified) like Cu, Ni,Sn, Sb, Mo, Cr Sn have effect due their segregation at interfaces (surface, grain boundaries). Also presence of elements like Mo, Cr, Ni, Cu have effect in solid solution.

Ship Breaking Scrap – The steel scrap from the demolished ships has become a major source of raw material for the re-rolling mills in India. It has been assessed that 70 % of the total light displacement tonnage of a ship broken constitutes of re-rollable scrap for conversion as bar/ rods in re-rolling mill which are used in the construction industries. The other raw materials to produce bars and rods are re-rollable scrap from railways, pencil ingots from induction furnaces, semis from the integrated plants and imported re-rollable scrap.

Steel scrap generated from demolised ship fetches a very good price in the market. If prices express consumer preference, then there is a strong preference for the ship-recycling scrap. This is because of the high quality of steel that comes in the form of re-rollable scrap from ships which are usually manufactured in developed countries complying rigid specifications from the steel products which have the ability to withstand pressure, high impact and strain on account of severe cold. As such, use of such scrap ensure fully killed steel of similar qualities in re-rolled steel products with equal strength in terms of yield strength, notch impact strength and through thickness ductility, consistent chemical composition having low sulphur and phosphorus content, finer and compact grain size, low level of inclusions, corrosion resistance, good macinability and formability.

Incidentally, everywhere else in the world the scrap from the demolished ships are usually sent into melting furnaces, India is probably only country that has the technique of re-rolling scrap into producing construction steel without having to first cast scrap as billets and ingots. **In the interest of** the national economy generating large amount of revenues, scrap generated in this process route has advantage

for a number of reasons like **1. In our country, about 400** re-rolling mills are using this category of scrap. More than 60% of these scrap as raw materials are, presently, supplied to local steel industry. 2. Almost entire ship is recycled after life and reused/resold as raw materials to steel mills, steel plate re-manufacturing.

Auto Shredding Scrap : Scrap recycling industry is betting heavy by the government. At 25% (7 million cars) of total cars that could be scrapped initially, it is expected to generate business of around USD 2.9 billion (equivalent to ~INR 190 billion). These numbers are likely to grow over a period of time. On an average, a car weighs 1,400-1,600 kgs. Upon recycling, it generates 65-70% steel scrap, 7-8% aluminum scrap, 1-1.5% copper scrap and 15-20% rubber and plastic scrap. At current scrap prices, a recycled car can fetch roughly INR 30,000-35,000 (USD 380-455). Assuming 20-25% of vehicles are scrapped in first year, it has a potential of generating around 6 million tonnes (mnt) of steel scrap. Numbers are expected to grow in years to come.

In India, MSTC has planned to set up a first of its kind Auto Shredding Plant for processing of End of Life Vehicles (ELVs) and other White Goods for the production of ferrous and non-ferrous shredded scrap. In India the demand for steel is driven by the automobile and the construction industry. Secondary steel producers in India use shredded scrap for production of steel through IF and EAF. Scrap goods which contain steel can be recycled without any significant loss in its properties. Thus shredded scrap becomes an important input material for the secondary steel industry.

The existing un-organized method of processing of metal scrap results in lesser recovery rate as compared to international standards and is not consistent with international pollution and environmental norms. MSTC thus decided to tackle issue by introducing a mechanized Auto Shredding Plant in India. The plant will shred End of Life Vehicles (ELVs) and other White Goods that have reached the end of their useful life in an environmental friendly way. The output of the plant will act as the raw material for secondary steel production and lead to sustained development of the Secondary Steel Industry in India. The plant is being set up in the State of Gujarat and there will be collection centers in the suburbs of Ahmedabad, Mumbai, Kolhapur, Indore and Jaipur for facilitating the procurement of ELVs and white goods. The material can be supplied from any part of the country.

Sponge Iron/DRI has gained great importance as partial substitution of steel scrap in both IF and EAF. In steel making. DRI is a metallurgical process of producing sponge iron (honeycomb structure with pores) from iron oxide mainly from iron ore lump or pellets used as solid state charge in induction furnace, the purely melting unit of scrap and sponge iron where no refining of liquid steel can be done for the removal of P & S.

Advantage of Sponge iron as Charge Material: Sponge iron used in IF, as the major raw materials, are of two types **1**. coal based produced in direct fired rotary kiln process and **2**. coal based produced in indirectly fired vertical retort furnace process. The chemical and physical properties of these two were investigated, established and optimized by scientist/ metallurgist Mr. K.N. Gupta et al. for melting behaviour of sponge iron with respect to particle size, density, melting rate and quantity. In each case, slag has to be removed from melt in order to facilitate the maximum amount of sponge iron addition to the melt and the molten pool always has a cover of slag. It has been established that coal based sponge iron produced in direct rotary kiln and indirectly fired vertical retort furnace to optimize the rate of melting initially at 1300 deg C is varying the weight fraction of sponge charged.

Specific gravity, size, nature of slag produced in melting furnace affect the melting time of sponge iron, both in acidic or basic slag, average melting temperature of sponge iron observed almost same as 1300°C, but there may be slight temperature variation for different size range. For getting good result by use of sponge iron in steel making same should , preferably, have close size range distribution in charge with higher specific gravity and higher metallization (+92%).

In induction furnace, melting of sponge iron as bulk addition as furnace charge in melting pool is better than any basic furnace and maintain particular temperature being a function of the rate of excess

energy input over its liquidus point and the particles available for being melted. Melting rate increased steadily with increasing temperature of the pool upto 1600°C and above in need at all additions with optimum adjustment of superheat. The maximum melting rate increases steadily till 1500°C and afterwards it slows down and becomes somewhat asymptotic beyond 1600°C High metallized sponge iron > 92% with low gangue content is desirable for energy saving and safety. Low iron oxide content is important.

However, both the varieties of sponge iron charged with stringent specification (BIS i.e. IS 2:1960) exhibit identical pattern of melting rate but presence of gangue in sponge iron increases the power consumption and operational problems for de-slagging. Additive methodology of charging sponge iron as basic guidance:.

1. Sponge Iron charge to the tune of 30% for removal of C ,
2. Sponge Iron charge upto 50% level for removal of C and control of Tramp elements,
3. Sponge Iron charge upto 80% for removal of C grades in this standard to suit the above

Briquettes made out of sponge iron/ DRI produced in gas based by direct reduction process applying external pressure is termed as HBI. The cold bonded fines of sponge iron/ DRI is also formed as briquette used in induction furnace, Metallic Charge Model (Nominal break-up) for making 1 Ton of liquid Steel from 1.136 Ton of charge in IF :

Items	% Addition	% Yield	Quantity (Ton)
HBI/DRI/Sponge Iron	60	85	0.680
Scrap	30	92	0.340
Cast Iron/ Pig iron etc.	10	94	0.116

Process Flow in IF Route - Normal process flow in secondary steel producing sector as part of a chain leading from raw material to semi finished or finished products follows as scrap charging in IF, melt down, necessary additions, temperature & composition checking and adjustment, tapping in ladle, secondary refining, ingot casting or continuous casting, forging, hot rolling, treatments, inspection and testing, dispatch to customer, follow-up quality issues at customer end, provide necessary support to customers in need.

Normally, cast iron scrap is melted first in the furnace. The quantity of cast iron scrap is only 5-10% which is done to make a pool of liquid metal to enable steel scrap to melt faster in the furnace. The steel scrap charged is , mostly, having carbon content within specification limit of mild steel. The molten metal will, therefore, have the chemical composition having all elements as per specification because the presence of cast iron scrap in small quantity does not influence in increase of any element.

Effect and Influence of Tramp Elements on Quality & Properties – Presence of Tramp elements in scrap or in additives influence steel quality in two different ways. Firstly, they can influence the processing conditions of steel, from ladle treatment through casting to final annealing, thus indirectly affecting the quality of steel. Secondly, as constituents of steel they can directly influence the mechanical properties of steel products. Basically, all tramp elements contribute to an increase in strength associated with loss of ductility with a decrease in the drawing properties. These effects are more pronounced for low carbon, extra low carbon clean steel than medium or high carbon steel.

Copper has been found to be the key element contributing surface defects in steel products caused by ductility loss in the temperature range of 1050-1200 °C (hot shortness). Surface defects may appear during casting, hot rolling or forging. Surface scaling and the low solubility of Cu in austenite at that temperature range result in formation of a liquid copper-rich phase under the scale penetrating along grain boundaries leading to loss of ductility in the critical temperature range due to formation of intergranular cracks.

Alloying and tramp elements in steel, in some cases, modify the negative effect of Cu. Some of them enhance the negative effect and some others neutralize the negative effect of copper which is explained as "copper equivalent". For example, the expression **%Cu+10x%Sb+5x%Sn+2x%As-%Ni** shows that Sb (antimony), Sn(tin) and As(arsenic) when present in steel increase (enhance negative effect of copper) each of them to a different extent, the

negative effect of copper, while the presence of Ni reduces it . The tramp elements Sn, Sb, As and Bi(bismuth) tend to segregate at surfaces, grain boundaries or other interfaces and should be at the minimum possible level.

Occurrence of Segregation, during ingot casting or hot rolling/forging or cooling or during final annealing, reduces grain cohesion tending towards fracture causing embrittlement. It has been found that steels containing tin become brittle in the temperature range -30 °C - 0 °C on the other hand tin-free steels preserved their toughness at much lower temperatures. Tramp elements are more likely to cause embrittlement in alloyed steels than in plain carbon steels. Furthermore, the lower the carbons content of the steel, the greater the segregation of tramp elements on grain boundaries. Ni, Mn and Cr enhance the segregation of tramp elements, while Mo, Ti and rare earths can combat it. {Ref: Dr. D. JANKE ET AL.: Scrap based steel production, TEHNOLOGI JE 34 (2000) 6 39}

Conclusion - Secondary steel making and processing sectors, mostly, lack in their units in-house testing facilities. However, National Steel Policy for 2017 (approved in Cabinet very recently) has approved for setting testing facilities in steel hubs. Further, existing established facilities would be further strengthened to cater the need and support small units. Ministry of Steel is also facilitating the production of quality steel, particularly in MSME sector by carrying out R&D and technological interventions also providing financial assistance.

Induction Furnace units should be given support for carrying normal operations ensuring uninterrupted power supply to run at optimal and reasonable power cost, since IF is power intensive operating unit and power cost in production is about 60% of total operating cost excluding raw materials. Few mini steel plants have built power plants and DRI work together to generate electricity for their IF units to control costs in better ways.

However, melting and process technology in secondary steel sectors have to improve energy efficiency systems improving product quality introducing technology up-gradation schemes, they rarely have the ability and funds to implement development projects. Energy efficiency is, realyy, critical for secondary steel manufacturers where margins are increasingly getting squeezed by surging production costs and unavailability of affordable raw materials. Such units need the right combination of energy policies at the state and central level so as to get reliable access to energy for survival.

STEEL SECTOR NEWS

Strong economy the backbone of steel consumption

It is heartening to note that Indian economy is moving at the highest rate in the recent period and would continue to do so in the near future if the projections by IMF, World Bank, ADB and other reputed consultants are to be believed. In the current year, Indian GDP is projected to grow at 7.1%, closely followed by China (6.7%), South East Asian countries (3.5-6.5%) and advanced countries (1.0-3.7%). There is an overall appreciation of economic reforms underway in several states of the country that are making significant contributions to improve the country's ranking in doing business, competitiveness and similar other economic indicators.

The tax reforms in the form of GST from the beginning of the current month has been hailed by all as one of the major steps in aligning with global fiscal standards. The headline inflation rate is coming down and comparable to economically strong countries. The WPI rate and the consumer price index for the month of June'17 at 0.90% and at 1.54% respectively are in sync with the long term inflation target set by RBI. The current Account balance (export minus import) at (-) 1.2% of GDP is well within the risk range.

The interest rate in the country measured by 10-year government bonds at 6.6% is however still high. Apart from some of the weak economies like Brazil, Argentina, Russia and Venezuela, Indian interest rates are considered by the industry as not attractive for fresh investment. That the high interest rate has an adverse impact on investment and household consumption is proved by the declining trend of gross fixed capital formation that had consistently come down from 32.3% of GDP in Fy13 to 29.5% in Fy17 and a slower growth of private consumption (8.7%) in

Fy17 as compared to 20.8% growth in government consumption. It is widely expected that RBI would bring the Repo rate down in August'17 to match industry expectation and further encourage private consumption growth.

There are some reports on increasing unemployment in the country. At 5.0% the rate of unemployment in India is higher than the advanced countries and China, but much lower than in many other countries like Canada, France, Italy, Sweden and South East Asian countries.

The tardy growth in industrial production is another area of concern. IIP growth with the new base of 2011-12 has dropped down from 3.1% in April'17 to 1.7% in May'17. The manufacturing sector has clocked 1.8% growth in the first two months of the current fiscal with 2.5% growth in Infrastructure and Construction, (-) 3.4% growth in capital goods and (-) 5.0% growth in consumer durable segments. The slow pace in industrial production has restricted the steel consumption rate in Q1 of Fy18. The consumption growth of non-alloy steel during the period at 5.8% is reasonably well as compared to consumption of alloy and stainless steel that has declined by 7.0% primarily due to lower pace of consumer durable (utensil grade) segment. It is to be noted that manufacturing of motor vehicles (commercial vehicles and others), trailers etc has gone down by more than 14% in Q1 of this year.

Steel intensity in GDP in India has consistently declined in the last few years and has reached the peak at 0.73 in 2015-16. Taking the last 5 years the average steel intensity is at a low level of 0.5. It is acknowledged that a minimum number of 10 observations are required to arrive at a statistically sound elasticity estimate. As a longer series prior to 2011-12 based on new series 2011-12=100 (revised IIP and WPI) is not made available by CSO, we may base our demand projections on the assumption of a better steel-GDP relationship.

The supposedly weak relationship between consumption of steel and GDP in the country can be mostly reversed by enhancing steel intensity in investment in infrastructure and construction, automobile and engineering industries. It would be the surest way to increase share of industry or the secondary sector in GDP from the current 30-31% to a minimum of 36%. The current thrusts of the government in pushing investment in urban and rural infrastructure building, affordable housing, defence procurement, rail and road connectivity would all contribute to promoting steel-GDP relationship on a longer time perspective.

Source: Financial Express

Ensure power supply to utilise full potentials of steel industry

Experts opined that Bangladesh steel industry has immense growth potentials, which can be explored and utilised in the upcoming years, provided Chittagong Port's handling capacity is enhanced as well as ample gas and electricity supply is ensured.

They said Bangladesh's steel consumption is currently around seven to eight million tonnes a year, which will rise to 18 million tonnes a year by 2030, if the sector gets necessary support.

These views came in International Steel Long Products Summit 2017 at Radisson Blu Chittagong on Tuesday. Major steel producers from home and abroad participated in the daylong event with their products.

Local major steel producers, like - BSRM, GPH Ispat, RRM, PHP Family and RSRM, along with global steel sector leaders, like - SMS Group of Germany, Primetal Technologies, Electrotherm, Conecranes, MHM, Padman, Steel Users Forum of India (SUFI), Doshion Water Solution, Baumer, M Sons Industries and IMT, showcased their products.

Assistant High Commissioner of India in Chittagong Somnath Halder spoke at the summit as the guest of honour, while Chairman of PHP Family Sufi Md Mizanur Rahman inaugurated the programme.

The inaugural session was organised by Steel Group of Mumbai, and chaired by its founder and CEO Ajay Tambe.

Chief Economist of Joint Plant Commission of Indian Ministry of Steel Dr A S Firoz presented the keynote paper on different aspects of global steel sector as well as investment in producing quality steel products.

The second session of open discussion was moderated by Dr Shusmita Dasgupta, deputy chief economist of Joint Plant Commission.

Mr Somnath said steel sector has been contributing immensely to human civilization through innovation of advanced technology and marketing.

Joint investment and bilateral cooperation between Bangladesh and India can take local steel industry to a new height, as Indian technical assistance can help to enhance capacity of Bangladeshi steel plants, he added.

Sufi Mizan said the summit will play a significant role in ensuring quality production and value creation of local steel sector.

Referring to the recent list of loan defaulters he said only 100 businesses are defaulters of Tk 1,113.47 billion, deposited by the country's common people in banks.

"If they return the money, the banks will become stronger and may lower interest rates. Thus borrowers will also be benefitted," he added.

Dr A S Firoz said one investor may have money in his pocket, but it does mean that he will invest it irrespective of place and time and without considering its outcome.

"Bangladesh and India can jointly enrich the steel sector with coordinated investment, and it is the high time to proceed (in this regard)," he noted.

Managing director of PHP Md Zahirul Islam Rinku, additional managing director of GPH Ispat Almas Shimul, executive director of BSRM Tapan Sengupta, chairman of Moulana Ispat Abul Bashar Mukul, chairman of RRM Sumon Chowdhury, chief of marketing and product development of BSRM M Firoz, CEO of Abul Khair Group V M Sharma, Pradip Kumar Ghose of SMS Steel, executive director of KSRM Inamul Huq, and Dewan Mahbub and Sobail bin Hossain of RSRM also spoke at the summit.

Adequate supply of gas and electricity must be ensured to boost production in local steel plants. Besides, 15 per cent annual growth in Chittagong Port deserves full-scale use of its existing infrastructure facilities along with installation of more equipment for further expansion, they opined.

Source: Financial Express

Government may impose countervailing duty on certain steel products

The government may impose countervailing duty of 18.95 per cent on imports of certain kind of flat steel products from China to guard domestic players from cheap imports.

In its final findings, the Directorate General of Anti—Dumping and Allied Duties (DGAD) has concluded that despite sufficient demand in India and capacities, the domestic industry has lost sales opportunities, "which is a direct consequence of subsidised imports" from China.

It has recommended that the actual duty should be the difference between the quantum of countervailing duty proposed (which is 18.95 per cent) and anti—dumping duty payable, if any.

"The authority recommends imposition of definitive countervailing duty…so as to remove the injury to the domestic industry," the DGAD has said in a notification. While DGAD recommends the duty, finance ministry imposes it.

It added that there is a significant difference between the prices offered by the domestic industry and foreign producers."Resultantly, domestic industry lost significant sales volumes," it said.

Jindal Stainless Ltd and Jindal Stainless (Hisar) Ltd on behalf of the domestic industry had filed the petition for initiation of anti—subsidy/countervailing duty investigation concerning imports of "flat rolled products of stainless steel" from China.

The move assumes significance as the sector is facing challenges due to cheap steel imports.

Source- the hindu business line

'Exempt steel import above 1,250 mm width from further duty'

Exempt stainless steel imports above 1,250 mm width for all grades not manufactured in the country from any further duty to protect domestic industry, Capital goods and Process Equipment manufacturing body PPMAI today demanded.

Process Plant and Machinery Association of India (PPMAI) in a letter to Aruna Sharma, Secretary, Steel, demanded the exemption.

"The demand from capital goods industry is for new-age grades and sizes beyond 1,250 mm width. In fact, the industry is buying stainless steel coils and plates in widths as high as 320 0mm which the domestic industry cannot manufacture. PPMAI Secretary VP Ramachandran said in the letter.

The domestic industry can supply the most common grades like 304 and 316 up to 1,600 mm width only and there are severe limitations in thickness capabilities too, he said.

"The Capital Goods industry, SMEs and MSMEs need products of all grades and sizes in stainless steel for manufacturing capital equipment for domestic and global markets," he added.

The domestic stainless steel industry is mostly manufacturing low-end grades of stainless steel and that too are not conforming to any international or national standards, the letter mentions.

The Indian Capital Goods Sector remains sub-scale despite an output of Rs 2,50,000 crore and contributing nearly 2 per cent to the GDP, PPMAI said.

Source: Economic Times

Steel manufacturing cost to rise as power out of GST: Steel Ministry to PMO

The steel ministry has expressed concerns that cost of steel manufacturing will increase as electricity, being one of the major inputs, has been kept out of the Goods and Service Tax.

The concerns were expressed at a recent meeting of the ministry with the Prime Minister's Office, a government official said.

"Electricity being a major input for steel industry will increase the cost of manufacturing if it remains out of the GST," the official said.

The concerns were also expressed by the steel ministry during the meeting that the Clean Energy Cess of Rs 400 per tonne which was being charged pre GST remains effectively non-cenvatable in the new regime.

Natural gas, one of the inputs used in manufacturing sponge iron/Hot Briquetted Iron, an intermediate product used in steel making, has been kept out of GST purview. Under the previous regime, a partial was available, the official said.

"However, in the new regime, the tax paid on the natural gas is a cost and no input tax credit is available on the same," the official added.

The steel ministry is also of view that royalty is charged on iron ore at 15 per cent of the base price and is yet not cenvatable.

Besides, Forest Development Fee (FDF) and similar charges like contribution in District Mineral Foundation and National Mineral Exploration Trust, which are in the nature of tax, need to be subsumed in GST, the official said.

The steel industry had earlier in the month said that with GST rollout the unorganised players in the sector will have to move to organised form of doing business.

GST, India's biggest tax reform since the Independence --- was rolled out this month, unifying more than a dozen central and state levies.

Source: Economic Times

India to overtake Japan in Steel Production in 2 years

India would overtake the world's second largest steel producer Japan in the next couple of years and the country has targeted to produce 300 million ton of steel by 2025-30, a senior Tata Steel official said here today.

India is currently producing 90 to 95 million ton of steel per annum against the world no.2 steel producer Japan, which produces around 103 million ton, said Dr T Venugopalan, Technical Advisor to Tata Steel Managing Director.

“India is all set to overtake Japan in next couple of years… The country has (also) targeted to produce 300 million tons of steel by 2025-30,” he said.

Venugopalan was addressing participants at the Grand Finale of 'Mind Over Matter', an annual innovation challenge programme of the private steel major.

Stating that the steel sector has started improving, he said the sector contribute to one to 1.5 per cent in the country's GDP.

Venugopalan, however, said good quality coal was drying out in the country and some process was needed to improve low quality coal.

On iron-ore deposits in the country, he said it would last for 30 to 35 years, if it is used in the country.

Earlier, Tata Steel announced the season-4 winners of 'Mind over Matter'. The six-month-long programme culminated in the grand finale held today, where five teams presented their innovative ideas before the jury.

Source: PTI

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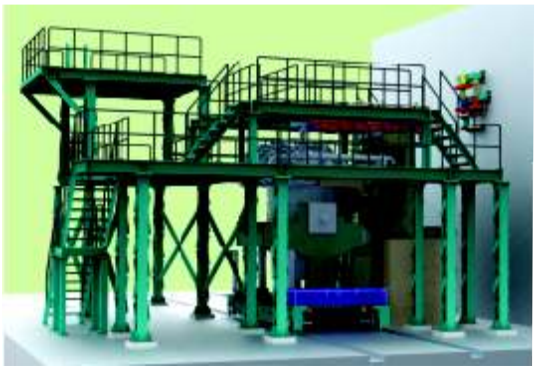

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