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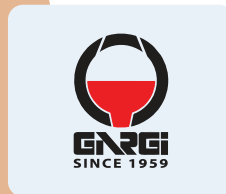
FOUNDRY TALKS

Foundry E-Magazine

For The Foundrymen By The Foundrymen



Innovation Article By



MESSAGE FROM CHAIRPERSON

Go GIFA Go Global



Anuja Sharma

Chairperson, IIF-Western Region
Dir.-Mrkt.-Shamlax MetaChem Pvt. Ltd.

This issue of Foundry Talks, we discuss mainly about export. India stands 2nd in casting export in the world but there is a huge difference between India and China (ranked 1st in casting exporters). There is a huge scope for India in export market. IIF organizes many programs which creates awareness and give informations about export market in various countries. June 2023 is also known as GIFA month, this trade fair occurs once in four years and this is first after covid. Many delegates are participating in this huge fair from India. Hot topics at GIFA 2023 are Sustainability, Digitization, Circular Economy and New Production Technology. Hope this would be a great learning for our Indian Foundrymen.

Wishing them all the very best.

MESSAGE FROM THE EDITOR



Anant Bam

Editor Foundry Talk
Foundry Consultant
& Energy Auditor

Dear Readers,

Coming month, June, is the month of the GIFA, one of the biggest International Foundry Trade Fair being organized in the Dusseldorf, Germany from 12th to 16th June 2023. From India, many delegates are visiting as an exhibitor or visitor. It is important to note that the visit should not be considered as taking an overview and coming back but one should meet the international experts, understand the latest technologies and get at least one learning which could be implemented here. It will not only help the organization to grow but will help overall foundry industries in India as well.

In this issue, we have focused on the melting optimization, one of the key energy savings area and also some special insights on exports for GIFA visitors with message from IIF President on the same. We hope you all enjoy the reading

I wish all the delegates visiting GIFA 2023 a happy journey and fruitful visits.

We truly welcome your feedback or suggestions for WR E-magazine. Please feel free to write to us at wr@indianfoundry.org with subject "Letter to Editor".



FOUNDRY TIPS

By Mr. Monish Kumar V R
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Techniques to Optimize Energy Consumption in an Induction Furnace

Introduction:

Energy is a multiplying factor that allows man to translate various raw materials and resources into useful items to meet the daily demands and necessities of human beings. The Indian foundry industry is the second-largest in the world, and there are more than 6,000 foundries in India alone. The metal casting industry is one of the most energy-intensive manufacturing sectors, with the melting process accounting for 55–70% of its energy consumption. The availability of energy is far less than the demand. Moreover, as we assume the responsibility of embracing greener manufacturing practices, it becomes imperative to optimize energy consumption in order to mitigate the industry's carbon footprint.

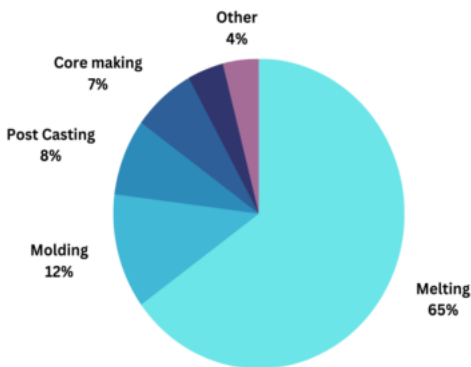


Fig 1: Section Wise distribution of energy consumption in a foundry

Typical energy consumption in foundries:

In the foundry industry, efficient utilization of energy is crucial to maximizing output while minimizing input. Melting furnaces, powered by solid fuels, natural gas, electricity, or other energy sources, play a significant role in this process. However, achieving optimal energy efficiency remains a challenge for many foundries due to various operating conditions. This article focuses on highlighting energy-saving techniques that can be implemented in foundries to achieve considerable energy savings and improve overall efficiency.

Techniques to save energy consumption in foundries:

Cleanliness of Charge: To maximize energy efficiency in foundries, it is essential to prioritize the avoidance of rusty and dirty inputs while opting for cleaner carburizers. When uncleaned foundry returns containing sand are utilized, the conversion of adhesive sand residue into slag consumes a significant amount of specific energy, comparable to that required for melting the iron itself, i.e., 500 kWh/t. Considering a practical quantity of 20 kg of sand per tonne of iron, this accounts for an additional energy consumption of 10 kWh/t. This increases the quantity of slag as well.

The presence of rusty charge material in foundries adversely affects electromagnetic coupling, leading to an inefficient transfer of melting energy and significantly longer melting times. In fact, rusty steel scrap can take 2 to 3 times longer to melt compared to non-rusty scrap, requiring a 40% to 60% higher power input. This not only results in increased energy consumption but also leads to higher melting losses and larger volumes of slag. To mitigate these issues and improve energy efficiency, shot blasting techniques can be employed.

Charge Material	Weight, kg	Time Min.	Min. Kg.	Energy, kWh	Consumption, Kwh/t
Clean steel scrap	250	75	0.3	210	840
Rusty steel scrap 1	200	185	0.93	270	1350
Rusty steel scrap 2	275	192	0.7	335	1218

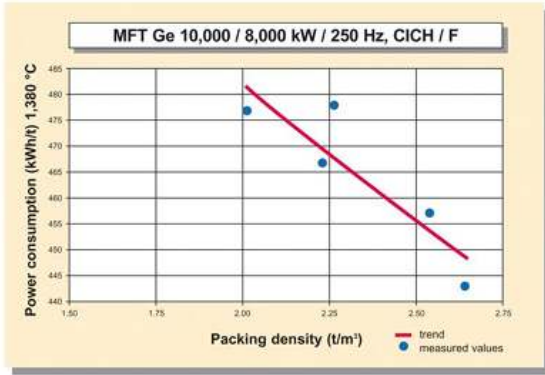


Fig. 2. Effect of packing density on power consumption (MFT Ge 10,000 / 8,000 kW / 250 Hz).

Packing Density: The density at which the materials are packed into a foundry furnace has a direct impact on the degree of electromagnetic coupling that is attained and the power required to operate the charge. The heat cycle and energy consumption vary accordingly based on the packing density. Insufficiently compacted raw materials inside the furnace lead to suboptimal operation at the supplied power, resulting in time loss. Experiments involving different dimensions of returns and steel scrap fractions showed that packing densities in the range of 2 to 2.7 tonne/m³ can be achieved. Trial results revealed that decreasing the packing density from 2.5 to 2.0 tonnes/m³ resulted in a 25 kWh increase in power consumption. Despite the additional cost and effort, it is recommended to crush bulky returns to achieve a higher packing density. This not only facilitates furnace charging but also eliminates the risk of material bridging in the furnace.

Size of scrap: The presence of long scrap sections that extend out of the top of the furnace can significantly impact furnace utilization as they take longer to melt. It is important to consider the size of the scrap to prevent bridging of the charge inside the furnace. As a general guideline, each piece of scrap should not have a dimension greater than 33% of the furnace diameter, and no dimension should exceed 50% of the furnace diameter. Adhering to these size limitations ensures proper melting and prevents obstructions or inefficiencies in the furnace's operation.



Fig 3: Compacted CRC Scrap

Charging pattern: Efficient energy consumption in foundries can be achieved by implementing specific charging patterns tailored to the type of raw materials being used.

- a) CRC scrap can be compacted into solid cubes and charged into the furnace instead of loose scrap. This approach is beneficial because loose scrap can create air gaps, which hinder efficient electromagnetic induction. Air gaps act as poor conductors, leading to reduced overall efficiency. By compacting CRC scrap into solid cubes, these air gaps are minimized, resulting in improved energy efficiency during the melting process.
- b) The electromagnetic field reaches its highest density at the walls of the crucible (as illustrated in Fig. 4b), making it the ideal location for the densest charge materials. Rough, bulky pieces should be in the center of the furnace. Continuous charging is essential to ensure the furnace remains consistently full, enabling it to operate at full power. By maintaining a full furnace through continuous charging, optimal energy utilization and efficient operation of the furnace can be achieved.

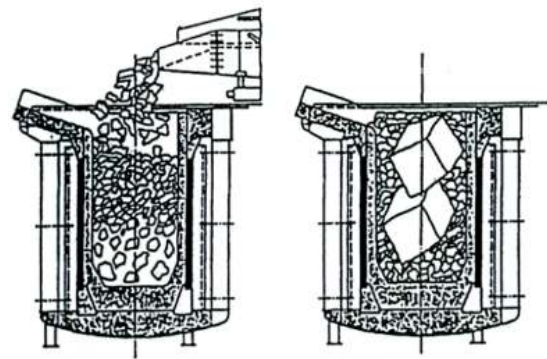


Fig: 4
a) Continuous charging through vibrating chute,
b) Charge distribution according to size

- c) Optimizing carburizing with a high- quality carburizer Another factor that significantly impacts power consumption is the method of adding carburizing agents. Adding carburizing agents to the molten metal bath after the melting process consumes more power compared to adding them along with the solid charge material at the beginning. This practice can result in an additional energy consumption of approximately 1 to 2 kWh per kilogram of carburizing agent. For example, a realistic input of around 2% carburizing agents can lead to an extra consumption of up to 40 kWh per tonne of iron. It is crucial to perform carburizing before alloying with FeSi. Additionally, it should be noted that a higher silicon (Si) content in the cast iron reduces the need for carburization, thus reducing overall carburizing agent usage.

d) It is important to consider that when incorporating metal chips into the charge, despite their favorable packing density, there is a significant limitation in electrical contact due to the small contact surface area and surface oxidation. This results in poor electrical conductivity within the charge. However, by briquetting loose chips, the electrical energy consumption can be reduced.



Fig 5: Briquetted metal borings /Chips

Closed furnace lid: To minimize energy losses in foundries, it is crucial to minimize the opening times of the furnace. The necessary opening times for charging, removing slag, temperature measuring, sampling, and pouring typically vary between 50 and 25% of the shift time. A well-fitted closed lid limits the surface heat loss to about 1% of the input power. It is quite easy to estimate that when a 1.5 m diameter lid of a 1t induction furnace open for 5 min heat losses are of the order of 7kWh

Scrap sorting: Scrap sorting and charging systems that achieve higher density charges show an increase in efficiency through an increase in coil efficiency and a shortening of melting time. Furnace loading time has been shortened by utilizing special vibrating conveyor systems designed to directly feed scrap into the furnace during melting. Melting time is reduced by preheating the charge before loading to remove moisture and residual oil.

Avoid Superheating: The tapping temperature depends upon the type of steel or cast iron and the superheat needed in the liquid metal for its end use. It is important to note that tapping molten metal at high temperatures can lead to increased refractory erosion and higher power consumption. Unnecessarily superheating the liquid metal to excessively high temperatures results in significant energy costs. For instance, a temperature rise of 50 K can consume approximately 20 kWh per tonne of iron. Minimizing the overheating of a molten bath saves energy. The superheat temperature for the liquid metal should be determined based on the steel specifications and the anticipated temperature loss during the transfer of the liquid metal to the pouring process.

Table 1: Breakup of energy consumption for melting 1 ton of cast iron

Parameter	KWh/ton
Melting Enthalpy	390
Thermal & Electrical losses	136
Energy consumption for melting	516
Sand in charge material 20 kg/t	10
Rusty charge material	30
Carburizing after melting	30
Low packing density	25
Open lid	15
Unnecessary superheating 50K	20
Total Extra consumption	130
Total consumption	656

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Conclusion: Optimizing energy consumption in foundries is critical for reducing costs and environmental impact. Implementing these strategies not only enhances operational efficiency but also contributes to a more sustainable and environmentally friendly manufacturing industry. It is imperative for foundries to embrace these energy-saving techniques and pave the way towards a greener future.



Mahesh Date

Raw Material Price Index

Movement In Foundry Raw Material Prices

As per IIF data, there are nearly 7,000 foundries across India. The Indian foundry industry is ranked second globally with a production of 10 million tons per annum. It is catering to the automotive, tractor, power train, railways, energy and engineering sectors in domestic as well as overseas markets - Directly and indirectly.

There was sudden spike observed in April 2022 and continued due to various reasons. Prices got declined-stabilized thereafter but these fluctuations led us to establish the common reference point where we can study the actual raw material prices variations.

Now prices ruling in Kolhapur during second week of May 2023 are given in column 14 in the Table below. Also, given in table are the prices since Feb. 2023. These prices are collected from Kolhapur market. These are approximate, ruling during the month and week as indicated in the table.

In the prices indicated below, transportation cost is included in most items. Only applicable GST is to be added. Prices of many materials are on the basis of "Immediate Payment"

Movement Of Prices of Raw Materials over a Period of 4 Months

(A) Major Ferrous Metallic Raw Materials, Low Ash Metallurgical Coke, and Electro-Graphite Fines {Rs/ Tonne}														
	Feb-23	Feb-23	Feb-23	Feb-23	Mar-23	Mar-23	Mar-23	Mar-23	Apr-23	Apr-23	Apr-23	Apr-23	May-23	May-23
	1 st Week	2 nd Week	3 rd Week	4 th Week	1 st Week	2 nd Week	3 rd Week	4 th Week	1 st Week	2 nd Week	3 rd Week	4 th Week	1 st Week	2 nd Week
Foundry Grade PigIron	52616	52616	52616	52616	52616	52616	52616	52616	52116	52116	50800	50800	50800	49866
MS Scrap (good quality)	44750	44500	44500	44500	44250	44500	45000	45500	45000	45000	45000	45000	44600	44500
Low Mn Steel Scrap	46000	47000	47000	47000	46000	46500	47000	47500	47500	47000	47000	47500	47000	46500
Si Steel Stamping Scrap	46000	46000	46000	45750	45250	45500	45500	46000	46000	45500	45500	46000	46000	46000
Low Ash Met. Coke	50500	50500	48500	48500	49000	49000	49500	49500	48500	48000	47500	47500	47500	47500
Electro-Graphite Fines	99500	95000	100000	100000	101000	105000	105000	108000	105000	102000	100000	100000	95000	95000

(B) Major Ferro-Alloys {Rs./Kg}														
Fe-Si (70-75% Si)	140	137	135	135	136	135	135	137	135	135	131	131	131	130
Fe-Si-Mg (5-7% < Mg)	200	190	190	190	200	210	215	225	210	210	200	200	205	205
Fe-Si-Mg (5-7% < Mg) (TOL)	±5	±5	±5	±5	±5	±5	±5	±5	±5	±5	±5	±5	±5	±5
Fe-Si-Mg (8-10% Mg)	195±5	195±5	190±5	190±5	205±5	220±5	225±5	235±5	230±5	225±5	220±5	220±5	220±5	220±5
High C Fe-Cr (60% Cr)	110	115	117	117	118	118	120	122	125	125	121	121	121	127
High C Fe-Mn (60% Mn)	88	88	89	90	95	95	100	105	105	100	100	99	100	105
Ferro-Moly (60% Mo)	4550	4300	4100	4300	4000	3800	3500	3750	3000	2300	2650	2600	2650	2650

1. Above Prices are Excluding Taxes, GST Extra as Applicable
2. Phenol Price: Rs. 112/Kg during 2nd week of May 2023
(Info collected during May 2023, Reader are requested to check the market prices)

Disclaimer: Rates represented here are as per the data collected from the reliable sources based in Kolhapur and it may vary based on the supplier, location, payment terms & other conditions.

Innovation Article

By M/s. NowPurchase

Iqbal Naseem | Head – MetalCloud | iqbal@nowpurchase.com

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NowPurchase's MetalCloud: Empowering Foundries with AI and Market Integration for Increased Efficiency and Cost Reduction



Introduction:

Artificial intelligence (AI) has been transforming various industries, and now it is revolutionizing the casting process. Casting foundries traditionally rely on manual methods to generate charge mixes, resulting in inefficiencies and suboptimal casting quality. However, with the emergence of **AI-powered solutions like NowPurchase's MetalCloud**, the casting industry is experiencing a remarkable shift towards intelligent charge mix optimization. This article explores how AI is reshaping the casting process, enhancing market integration, and improving overall efficiency.

Understanding Charge Mix in the Foundry Process:

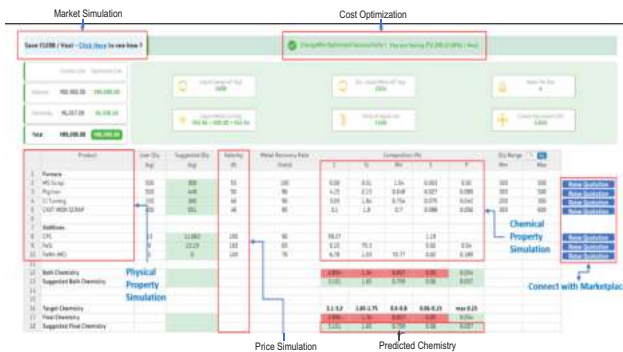
The charge mix in the foundry process refers to the **combination of various materials (such as metals, alloys, and additives)** required to produce castings with desired characteristics. Achieving an optimal charge mix is crucial for ensuring the **quality, strength, and durability** of castings.

Conventional Methods of Generating Charge Mix:

Until recently, foundries relied on **manual calculations** and **experience-based decision-making** to determine the charge mix. This approach was **time-consuming, prone to human errors**, and often **failed to exploit the full potential of available materials in the market**. As a result, it **hindered cost optimization** and **limited the ability** to produce castings with superior properties.

AI-driven Charge Mix Optimization with NowPurchase's MetalCloud:

NowPurchase's MetalCloud leverages AI algorithms to generate an optimized charge mix automatically. By analysing vast amounts of **historical data, real-time market trends, current inventory and material properties (chemical and physical)**, against the desired properties, MetalCloud utilizes machine learning techniques to recommend the ideal combination of materials for each casting requirement. This approach not only ensures **superior casting quality** but also **minimizes costs** by intelligently simulating materials from the inventory, and suggesting the materials available in the market. **NowPurchase's marketplace** also enables in procuring materials intelligently.



NowPurchase's Processing Centre in action

NowPurchase not only offers charge mix optimization but also provides a **comprehensive solution for scrap processing**. The processing centre **ensures the quality and size** of scrap materials, meeting the specific requirements of the client. This integrated feature enables the foundry to source high-quality scrap that aligns with their production needs, further enhancing the overall casting process.

Commodity / Delivery / Region	Grade	Buy Price/ton	Revenue/ton	Last updated	Action
Scrap Process 1 (2000)	30-35%	₹1,20,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
CRANE CHARGES 1 (1000)	2.000 and 1.000 ton	₹50,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
FERROUS CHARGE HIGH CARBON	10000000	₹1,00,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
Non-ferrous Charge (2000)	10000000	₹75,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
FERROUS CHARGE LOW CARBON	10000000	₹1,00,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
FERROUS CHARGE MEDIUM CARBON	10000000	₹1,00,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
WORLD PLATFORM FINE MOLD	10000000	₹10,70,000.00	₹7,70,000.00	May 24, 2023	Buy/Quote
High Carbon Charge	10000000	₹1,00,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
High Carbon Charge	10000000	₹1,00,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote
High Carbon Charge	10000000	₹1,00,000.00	₹1,00,000.00	May 24, 2023	Buy/Quote

Market Integration and Intelligent Material Procurement:

NowPurchase's MetalCloud integrates with the company's marketplace, allowing foundries to **procure materials directly through the platform**. By connecting the charge mix optimization process with real-time market data, MetalCloud suggests the most cost-effective options without compromising casting quality. This integration **streamlines the procurement process, saving time and effort** while **maximizing the utilization** of available resources.



NowPurchase's Marketplace





Spectrometer Integration and Feedback Loop:

MetalCloud further enhances charge mix optimization by **integrating** with **spectrometer computers**. Spectrometers analyse the chemical composition of materials, providing valuable data on their properties. MetalCloud uses this data to create a **feedback loop, continuously learning and adapting** to refine charge mix recommendations over time. This iterative process ensures an efficient and consistent casting performance, improving productivity and reducing waste.

Spectrometer Integration and Feedback



Spectrometer's Feedback

Real-time Notifications and Spectrometer-based Suggestions:

MetalCloud's integration with spectrometers enables **real-time notifications** and **suggestions**. Through **WhatsApp notifications** and **real-time display**, foundry operators receive **immediate updates on the spectrometer readings** and **suggested adjustments** to achieve the desired target chemistry. This **instant feedback minimizes the time and effort** required for manual monitoring, allowing operators to make **timely decisions** and **optimize** the casting process effectively.



Real time WhatsApp Notification with addition / dilution suggestion



Foundry display with real time reading and suggestions on addition / dilution



NowPurchase's Metalcloud in action at a 4000 MT / Month Foundry in Kolhapur

Conclusion:

The application of AI in the casting process, particularly in charge mix optimization, is transforming the foundry industry. NowPurchase's MetalCloud leverages AI algorithms to generate optimized charge mixes, suggest materials available in market for further cost reduction, intelligently procure materials, and create a feedback loop through spectrometer integration. This innovative solution enhances casting quality, minimizes costs, and reduces the time and effort required in the process. With the integration of real-time notifications and spectrometer-based suggestions, MetalCloud provides foundries with a powerful tool to achieve efficient and consistent casting performance. The adoption of AI in the casting process is ushering in a new era of efficiency and productivity for the foundry industry.

User Story

NowPurchase's MetalCloud AI solution revolutionized the operations of a foundry in Kolhapur, producing 4000MT/month of castings. By optimizing the charge mix and leveraging market integration, the foundry achieved a remarkable **6% cost reduction** and **2% reduction in production time**.

MetalCloud's AI algorithms even suggested using high Mn scrap instead of low Mn scrap for a specific part, resulting in an **additional cost reduction of 3.5%**. The digitization facilitated by MetalCloud also brought intangible benefits, such as **securing orders** from customers in the **USA and Australia**, expanding the foundry's customer base and global presence. Overall, MetalCloud's implementation brought **improved cost efficiency, production optimization, and new business opportunities** to the foundry.



YOUR MELTING PROCESS
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METALCLOUD FEATURES



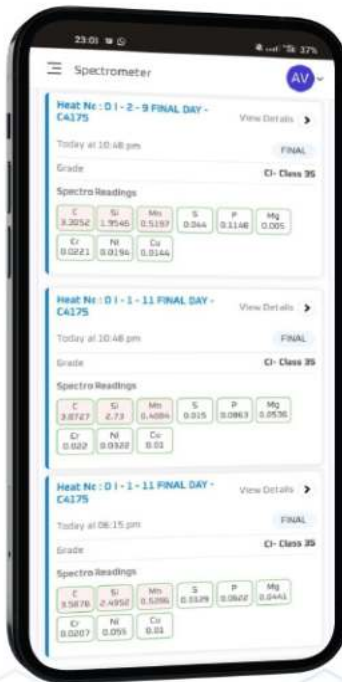
Live Heat Data on
WhatsApp



Increased Efficiency
in Melting Process



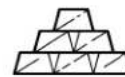
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Analytics of Your Heat
Data



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Addition/Dilution



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Raw Materials

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SPECIAL INSIGHTS

On Exports - GIFA Special

By: Mr. Ravi Sehgal, Past President, IIF

Friends,

The Indian Domestic market is strengthening with the rising demand in the Transport, Auto, Railway, Infrastructure and Manufacturing sector. However, one cannot ignore the need for Foundrymen to expand globally and take on the international market.

Why Export?

Overseas market is huge and India has less than two percent share in there which is indeed low if you compare to China's over Ten percent share. A huge vacuum is being created in supplies as many countries are reducing their exposure to China. The Services exports share of India is four cent of the global market but the merchandise at 1.8 percent share is a concern. It has been observed that by participating in the Exports market, Foundries or for that matter any industry gains in quality standards, process controls, competitive pricing and production costs besides getting exposed to a whole wide range of new products and modern technologies.

Where to Export?

is the first question that a domestic player asks and it is a good idea to firm up the plans on the market that the Foundry / Industry wants to reach out to. Decision on where to export depends on the products, market accessibility and the global trends. All major Western countries are buying Indian products and so are the Middle-Eastern and African countries but it would be worthwhile to explore the Latin American countries which are an emerging market. Asian countries are considered as competitors including China of course but a few exporters from India broke the "Great Wall" and were successful in selling to China. There are success stories of entrepreneurs using their contacts / relatives to leverage their stays to understand the market needs to get established. With China facing resistance from many countries, time is ripe for Indian manufacturers to take the advantage. GIFA 2023 in Germany this June will provide a unique experience to the Foundrymen for Exports.

How to Export?

Formalities for exports are simple for registered companies and the Export Council provides all information on how to begin. Care should be taken on the quality and delivery time and the necessary certifications that are needed in different countries. Online studies, attending seminars on exporting formalities and interacting with exporters would give new entrants a good start to understand the export procedures and incentives.

Current Scenario of Exports- 2022 and Covid period saw a good growth in exports but 2023 has marked a slowdown for various reasons. The continuing war in Ukraine has put stress on all NATO countries and their finances for projects of infrastructure and other growth areas. Besides that a slow recession has crept in many countries, thereby slowing down the market. However, there is a general belief that the second half of 2023 will be a turnaround period and the demand is bound to pick up. Having said this, the ups and downs in exports are cyclical and the best time to catch the market is - when it is on an upward trend and that is coming in the next few months.

Happy Exporting.

Congratulation To

M/s. Gargi HA

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Gargi HA bagged 35th Jamnalal Bajaj Award for Fair Business Practice 2023



Gargi HA is an Indian arm of the parent company HA Group, Germany. It is a joint venture between Gargi and Hüttenes-Albertus Chemische Werke GmbH. Gargi HA is a renowned foundry chemicals manufacturer and supplier.

Gargi HA has received a 35th **Jamnalal Bajaj Award for Fair Business Practice 2023** as a recognition of our commitment to fairness and ethical practices.

The Council for Fair Business Practices was launched on the Gandhi Jayanti Day in 1966 by stalwarts of business and Industry of that era, such as JRD Tata, Ramkrishna Bajaj and others. CFBP instituted the prestigious **Jamnalal Bajaj Fair Business Practices Awards** since 1988 to recognize and applaud the efforts of businessmen, business houses and business associate ones with an exemplary record of practicing and promoting Fair Business Practices.



They have received this awards from Mr. Keki Mistry (Vice Chairman and CEO, HDFC LTD), Justice B. N .Srikrishna, Former Judge, Supreme Court of India and Mr. Shekhar Bajaj (Chairman & MD, Bajaj Electrical LTD).

Since 1985, Gargi HA has persistently maintained its notable presence in the foundry industry by providing unrivaled foundry chemicals and commendable consumer service, both globally and nationally. They strive and work with utmost dedication to maintain high ethical standards in the business. Not only do they take care of their customers and stakeholders' satisfaction, but they also take care of their employees. They abide by the law and explore innovations and technologies to maintain transparency and a safer workspace.

Their values spin around excellent customer retention ratio, sustainable business practices, gender equality, a conflict-free work environment, progressive management, customer satisfaction, giving back to society, and more.

It is a great motivation for them to continue to uphold the highest standards of fairness and honesty in our business practices. They proudly say that Gargi HA strive to maintain the highest level of integrity and ethical standards in all their business dealings and want to be the most innovative company in the foundry industry in delivering superior customer value.

Gargi HA has always believed in winning the race today, while running the race for tomorrow...!



Message from President - IIF



Mr. Vinit Jain
President - IIF

The foundry industry is one of the oldest industries & is also known as Mother Industry. With over 4500 foundries spread across the country & through continuous modernization and innovation, Indian foundry Industry is contributing around 2.3% to the GDP and providing employment to over 2 million people.

Over the past decade, the Indian foundry industry has witnessed a substantial increase in its export volume. In the fiscal year 2020-2021, India exported approximately 2.15 million tons of castings, showcasing a robust growth rate by successfully diversified its export destinations, reaching to numerous countries across the globe. Notably, the United States, Germany, the United Kingdom, Italy, and other European nations have emerged as significant markets for Indian castings.

The Indian foundry industry has the potential to sustain a growth rate of around 12-15% in its exports over the next few years, based on market projections. With the expected growth in export volumes and special focus on value-added products, the export values of the Indian foundry industry could see a significant increase. While exact figures are subject to market conditions, it is not unreasonable to anticipate export values reaching approximately \$3-3.5 billion in the near future.

Also, the future growth of exports in the Indian foundry industry is expected to create more opportunities in sectors such as automotive, aerospace, defence, infrastructure, renewable energy, and medical equipment, opening up new markets and driving demand for specialized castings and components.

Embracing advanced manufacturing technologies such as 3D printing, automation, and digitalization will enhance the competitiveness and productivity of Indian foundries. This technological leap will enable them to offer high-quality castings with shorter lead times, attracting more export opportunities.

Happy Reading

Western Region Activities



Innovation Tech Series # 6 @ Ahmedabad