THE INSTITUTE OF INDIAN FOUNDRYMEN
WESTERN REGION

FOUNDRY TALKS

For The Foundrymen | By The Foundrymen

IIF WR E-Magazine

Edition : October 2023

REFORM PERFORM

Get Future Ready

Featured Article By

dynamic technology systems

PLASMA INDUCTION (INDIA) PVT. LTD.

E - MAGAZINE TEAM

Message from IIF Western Region Chairman

Prayut Bhamawat
Director
Mangalam Steelcast Pvt Ltd
Siena Engineering Pvt Ltd

Greetings to all readers!

Western Region is gearing up for one of the most awaited Regional Foundry Conference – **WESCON 23** which is scheduled to be on **24-25th November 2023** at beautiful venue – **Hotel Deltin, Daman.**

This month in October, IIF WR jointly with IIF Kolhapur Chapter organized 1st ever workshop on the **Environmental, Social & Governance (ESG).** It's a very first step towards the big goal of staying environmentally friendly & being self-sustainable through various means. We thank companies like Mahindra, Menon & Menon and Taural India Pvt who have already covered great distance in ESG and were willing enough to share their experience and benefits out of the same. We hope this session creates an awareness towards this topic and generates interest in the companies adopting such practices.

This issue of the magazine is particularly focused on **Best Practices on the Melting**, and I am thankful to our Guest Author **Mr. Anant Bam & Mr. Sandeep Kulkarni** for accepting the invitation at once to write for our readers giving their valuable input. On the same topic we have an article from **Dynamic Technology Systems,** OEM partner of Bruker giving a deep description on the Analysis Automation for Foundries and Steel Plants & **Plasma Induction Pvt Ltd** for giving article on Energy Efficient Melting Solutions. We have a winner for our Foundry Quiz section and would like to congratulate **Mr. Dilip Gehlot** for being the 1st to answer all the questions correctly and winning the Foundry Quiz competition which was on the topic – Moulding.

You can stay updated about all the events on our website as well as with our LinkedIn group – "The Institute of Indian Foundrymen - Western Region".

Design By: Mr. Nikhil Sharma

Production Director | Shamlax Meta-Chem Pvt. Ltd.

Mr. Nikhil Sharma completed his B. Tech Chemical Engineering with specialization in polymer technology from Laxminarayan Institute of Technology, Nagpur. Started with Shamlax in the year 2019 as the Production Head, he has been contributing towards the welfare of the organization with new innovations and process automation techniques. Presently he is the Joint-Secretary of Indian Institute of Foundrymen Nagpur Chapter.

Business Talk By: Mr. Mukund Pant

Managing Director | Metal Power Analytical Pvt Ltd

Mr. Mukund Pant holds an MBA from IIM Lucknow and a BE from BIT Mesra. He spent close to a decade in management consulting, assisting companies on diverse strategic, sales and operations projects. In Metal Power, leveraging his engineering background and management experiences he is ensuring rapid yet sustained growth in national as well international market.

Foundry Quiz By: Mr. Sivakumar Subbarayan

Plant Head | Pitti Castings Pvt. Ltd.

Mr. Sivakumar Subbarayan did his Diploma in Mechanical Engineering in 1986 at Bhaktavatsalam Polytechnic – Kanchipuram. Completed his BE Degree in Coimbatore Institute of Technology. Continuously upgraded qualification in the field of MBA and Non-Destructive Testing And is now Pursuing Doctorate in Management. He has worked with many Manufacturing organizations from Hard Core Manufacturing, like Lakshmi Pattern Works, Sivananda Steels Ltd, Lakshmi Machine Works Ltd, Bradken India Pvt Ltd, and many more. With about 36+ years of experience in the industry, he has been recently awarded as the "Indian Foundry Man of the Year 2015" at national level by Institute of Indian Foundrymen.

Material Price Index By: Mr. Mahesh Date

Managing Director | Ved Industries

Mr. Mahesh Date is a dynamic and accomplished entrepreneur with a passion for innovation and growth. As the founder and MD of Ved Industries, they have led the company to new heights, achieving remarkable success in the industry. Their visionary leadership and dedication to excellence have earned them recognition as a leading figure in the business world. With a proven track record of delivering results, Mahesh Date continues to inspire and impact the business landscape.

GUESTS

Best Practices By: Mr. Sandeep Kulkarni | GM– Aditi Industries, Kolhapur

Presently working as a GM in Aditi Industries , Ambap , Kolhapur. Working experience of 32 Years in foundry at various posts. Founder of "Dynamic Foundry group" on WhatsApp and YouTube. Authorised Trainer for Yogyta vikas Program by IIF. Conducted more than 1000 training sessions so far all over india foundries , IIF chapters and at Various foundry clusters & institutes.

Best Practices By: Mr. Anant Bam | Foundry Consultant

Foundry Consultant with more than 25 years of experience in consulting and 15 more years in manufacturing. Author of 3 technical CDs published by IIF-NCTS and many articles in Indian Foundry Journal. Conducted training programs for TATA Motors, Maruti Suzuki, Cummins, EATON, Philips and many IIF Chapters.

SPECIAL THANKS

Mr. C Sathyamurthy | Vice-President | Aquasub Engineering for sharing his knowledge and contributing in the magazine to ignite the grey cells of the foundrymen. He has warmly accepted to extended his support in putting up questionnaire for the Foundry Quiz.

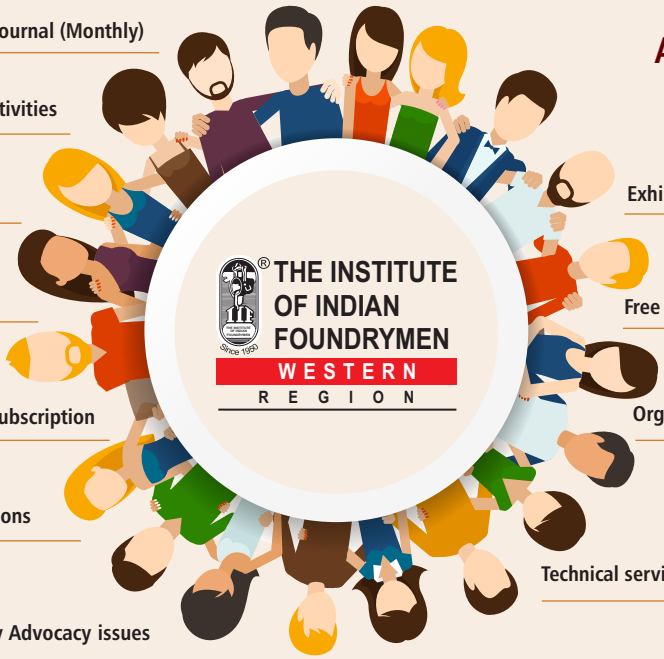
Mr. Subodh Panchal | Managing Partner | Kastwel Foundries for sharing artwork created by him over the years, showing "ironies" of the foundry industry in a witty way- through his comic strip.

Mr. Sudeep Shah | Chairman IIF Greater Mumbai Chapter | to share his views and give message to the foundrymen.

IIF MEMBERSHIP BENEFITS CHART

Member's Benefit

- Indian Foundry Journal (Monthly)
- Attend Chapter/Region Activities
- Conference fee rebate
- Representation in Councils
- Enjoy discount on membership subscription
- Receipt of Loyalty Coupons
- Highlighting Policy Advocacy issues



Additional Benefit for Industry Member

- Exhibition Space Rebate
- Free Entry in Indian Foundry Directory
- Organizing Yogyata Vikas Programs
- Technical services from Centers of Excellence

"We will love to hear from you on activities of IIF & also about E-Magazine. Please share your view by scanning this QR Code Below"

Contents

Melting

BEST PRACTICES

By: Mr. Sandeep C Kulkarni
GM , Aditi Industries, Kolhapur.

Best Melting Practices for Ferrous Castings

The melting department of a foundry is responsible for producing molten metal of the desired quality and composition for casting. The melting process is also a major source of energy consumption and emissions in the foundry industry. Therefore, it is important to adopt best practices that can improve the efficiency, safety and environmental performance of the melting department. For efficient and quality melting of the casting based on experiences and training conducted so far, I have consolidated the following crucial points as listed below:

1. Always keep at least 1-2 Heats material weighed and ready to go on the furnace deck.
2. Do ensure to note down Meter reading & Time before starting the furnace. It is important to identify the runner risers' grade wise & keep them separately.
3. For melting, always use Shot Blasted Runner risers.
4. Fill up the furnace within 30 Seconds after tapping out of material. Do Dense Charging to get Full Power from first minutes.
5. Use Cerawool Cover on the furnace to reduce Radiation Losses and to improve power consumption.
6. Cover all Alloys to reduce Oxidation and to get maximum Efficiency & Recovery
7. Covering of Inoculation, FeSiMg Alloy to avoid Oxidation of the same to get better recovery.
8. Weight all Scraps, Alloys & Inoculation.
9. Do Charge Calculations to avoid late addition.
10. Add "Carbon" at the bottom to get optimum recovery by giving it enough time for melting.
11. Use Tundish Cover for Ductile iron Treatment.
12. Use Red Hot, Clean Ladles for Pouring & for Mg Treatment.
13. Picking of Mg Alloys and covering is important.
14. Opening of Tundish Cover must be clean & open.
15. Keep Pouring ladles duly covered with Cerawool Cover to maintain Pouring Temperature.
16. Check Pouring & tapping temperature.
17. Validation of Temperature meters is important.
18. Metal weighing is essential.
19. Take Micro Sample and Spectro Sample at the last box.
20. Add Inoculation in the metal stream.

I prefer the following slogan suits best when it comes to the melting department.

- Always prefer to add CRCA, Do not add Carbon at the end (As a late addition)
- Keep some CRCA aside to maintain the Carbon % as per expectation.
- At every Transfer Point - remove Slag , Add Inoculant
- Melt Cold , Pour Hot
- Be safe

Please find some crucial training videos which I have uploaded on YouTube in reference to this topic. Please scan below QR Code.

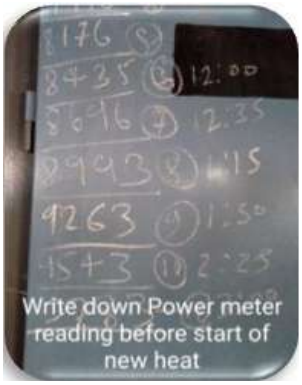
Best Melting Practices in Foundry

Manufacturing of Pearlite Ductile Iron

Manufacturing of Ferritic ductile Iron

Charge Calculation & late addition

To get this Charge calculation App free please WA Message to Mr Sandeep Kulkarni – 9049207701.



FEATURED ARTICLE

By: Mr. Mukesh Singh
Technical and Customer Service Manager (National)
Dynamic Technology Systems | Mumbai.

Analysis of Ore to Metals

Fast and accurate analysis of elemental concentrations simultaneously is required in many steps along the value chain of the metal industry:

Stage 1
Raw Material Inspection
PMI or Grade control of raw materials, metal ores, foundry chemicals

Stage 2
Charge Calculation
At the furnaces and smelters during the melting, input raw materials, scrap etc.

Stage 3
Metal Treatment
Composition analysed quickly and final decision taken based on accurate slag analysis and element control to meet alloy specifications.

Figure 1 Analysis stages during the Melting Process

Our OEM partner, Bruker AXS GmbH manufactures wide range of high-quality spectrometers that enable metal sample analysis necessary during all metal industry process stages i.e. from raw materials to melting through processing and recycling.

- Direct Reading spark-Optical Emission Spectrometer (s-OES)
- Combustion / Fusion Gas Analysis (CS/ONH)
- X-ray Fluorescence (XRF) spectrometry

are key technologies, supporting the success of the metal industry. No matter if stationary, portable or mobile, these analysers assure highest precision in all environments and for all tasks.

Analysis Automation for Foundries and Steel Plants

Automated Laboratory helps to reduce sample turnaround times and ensures consistent analytical quality. Foundries and steel plants are facing increasing competitive pressure to produce products with more precision and faster turnaround times. Automation of laboratory analysis sets new standards for manually operated instruments to match, and makes automation even more indispensable to advance the melting control in steel plants or foundries and improve their quality control capabilities.

Small and big furnaces melts chunks of metal and raw materials into red hot molten liquid metal. When decision is reached on alloy chemistry, their contents are poured into the ladles and then further into moulds. The cycle time of the analysis carried out manually and reporting the final analysis to the melting furnace depends upon the distance of the lab and on the scope of sample preparation. This leads to longer times of holding the melt in the furnace. Automated central laboratory including sampling, sample transport, sample preparation and sample analysis of steel or nonferrous metals provides a standardised process, helps to reduce sample turnaround times while ensures consistent analytical quality and improving overall productivity.

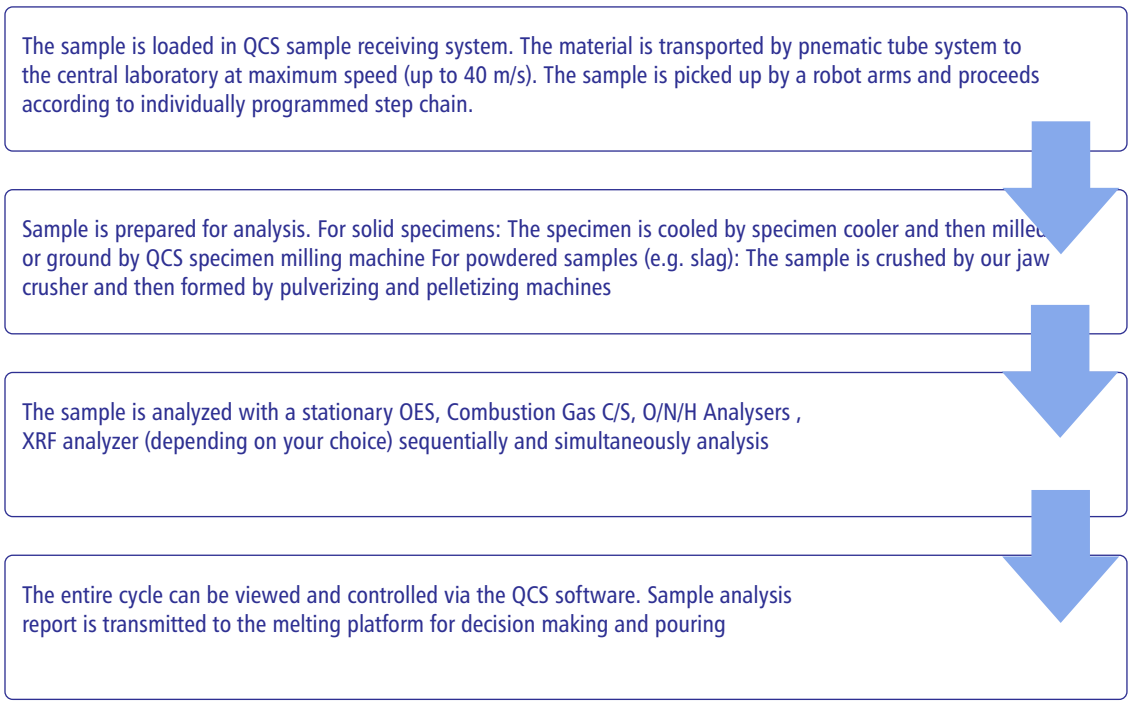


Figure 2 Automation of Sample Analysis, Transportation & Reporting stages

Our OEM Partner QCS Rohrpost GmbH designs and supplies the automation of sample transportation, preparation, analysis and reporting shortening the Lab analysis. The entire cycle from sampling to sample analysis takes 2 minutes with the QCS Automated Laboratory in container. In an aluminum and steel plant, this means that, on average, up to 500 samples per day can pass through quality control. Very conservatively, the conventional cycle takes at least 5 minutes. Now it depends on how many samples have to be taken before the steel crucible, which is heated to over 1,000 °C and sometimes contains 30-40T of liquid steel, can be poured off. In any case, it can be said that more metal is produced while maintaining the same quality. The cycle an be repeated up to 3 times for repeatability checks. In addition, it is possible to perform quality control directly during production.

To summarise, control of metal chemistry by the right combination of analytical technique and instrument during the melting process along with automation of the entire cycle of sample analysis in the laboratory to reduce the turnaround will play it's role in reducing the industrial greenhouse gas emissions, energy consumption, mining of raw materials and therefore making metal production more sustainable.

Dynamic Technology Systems supplies products for Material Analysis, Research and Inspection. For more information and details on products and technology get in touch with us at sales@dts-india.com or visit our website www.dts-india.com

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BEST PRACTICES

By: Mr. Anant Bam
Foundry Consultant

Best Melting Practices for Non-Ferrous Castings

For good quality of casting, major focus in given on the pattern, methoding and the moulding process but preparation of the metal i.e. melting also plays and important role. Good melting practices is basically a step by step process to flow to ensure consistent and quality metal. I have shared my recommended process/work instructions for melting, cleaning and degassing - developed based on my years of experience in this field. I hope will be helpful for all.

Work Instructions for Aluminium Alloy Melting

1. Ensure crucible is empty and clean. Check condition of crucible.
2. In clean crucible, add 0.3% cover flux by weight of charge.
3. Put some light returns (about 5 to 10 % of charge weight) at the base.
4. Put ingots vertically in the crucible till it can accommodate easily. Avoid jamming, keep sufficient looseness.
5. Put cover/ lid, start full power.
6. Put remaining ingots on the rim of furnace for preheating. (Keep lid area clear)
7. Once the ingots are molten and full liquid is attained, add pre heated ingots one by one vertically till easy accommodation. Cover lid. Repeat till all ingots are put in.
8. Once full liquid, add remaining returns batch wise, avoid lump formation, keep the mass liquid / sluggish semisolid.
9. Once all material is sluggish liquid/ liquid, add 0.3% cover flux by weight of charge, stir lightly, cover lid and wait for full temperature.

Adding Ingots Vertically

Loosely charged ingots

Work Instructions for Cleaning

1. Once Full temperature is attained, add 0.3% of cover flux by weight of charge.
2. Stir well from top to bottom all over so that the flux comes in contact with majority of molten metal.
3. If lumps of oxide and flux are formed, break them immediately by crushing against the crucible wall. Ensure powdery appearance of oxide along with orange – yellow glow of reacting flux.
4. Allow to settle for half minute.
5. Remove oxide carefully with perforated tool (Zara). Ensure metal is not going along with oxide.
6. Put the oxide in a metallic (M.S.) trolley and keep on stirring the oxide to avoid Thermit burning.
7. Scrape the crucible sides and bottom with suitable flat ended tools like spatula for loosening built up oxide.
8. Add 0.1% cover flux, stir lightly.
9. Remove all oxide carefully.
10. Keep balance flux (0.2 % to 0.5 %) handy for time to time use. Whenever oxide layer is observed in excess, sprinkle a spoonful of it and stir gently, push back the oxide to non use side of crucible.

Stirring Oxide and Dross

Removing Oxide

Clean Metal

Work Instructions for Nitrogen Degassing

1. Ensure the rotor is clean, Nitrogen cylinder is fitted, knob open, pressure adequate.
2. Move the degasser on top of furnace.
3. Remove lid of furnace.
4. Start Nitrogen flow.
5. Lower the degasser centrally till it rests on furnace top.
6. Ensure bubbling of gas.
7. Start rotation.
8. Add granular flux 0.1% by weight of charge.
9. Keep gas pressure between 1.5 to 2 Kg/cm2 and flow rate above 6 lpm.
10. For first degassing, cycle time should be 10 to 15 minutes depending on ambient humidity and dissolved gas content.
11. Degassing is to be repeated every hour during dry weather, and every 45 minutes during humid weather or whenever D.I. is at upper limit of acceptance.
12. For repeat degassing, cycle time should be 5 to 10 minutes depending on ambient humidity.

Clean Rotor Centrally on Top

Adding Granular Flux

Churning, Cleaning, Degassing

Raw Material Price Index

By: Mr. Mahesh Date
Managing Director | Ved Industries

Supported By

Movement In Foundry Raw Material Prices

Supported By | NowPurchase

The Raw Materials Price Index measures price changes for raw materials purchased for further processing by foundries. It is helpful to judge the market scenario and understand the trend. Prices provided below for the past 6 months are the prices collected from Kolhapur market just for the information only. These are approximate, ruling during the month and week as indicated in the table.

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

(A) Major Ferrous Metallic Raw Materials, Low Ash Metallurgical Coke, and Electro-Graphite Fines {Rs / Tonne}

	May-23	May-23	Jun-23	Jun-23	Jul-23	Jul-23	Aug-23	Aug-23	Sep-23	Sep-23	Oct-23	Oct-23	Oct-23	Oct-23
	2nd Week	4th Week	2nd Week	4th Week	2nd Week	4th Week	2nd Week	4th Week	2nd Week	4th Week	1st Week	2nd Week	3rd Week	4th Week
Foundry Grade Piglron	49866	49866	49366	49366	48866	48116	48116	48116	49616	49616	49616	49616	49616	49616
MS Scrap (good quality)	44500	44200	44000	44000	43500	43000	43500	43500	45000	45000	43500	43000	42500	42500
Low Mn Steel Scrap	46500	46500	46000	46000	45500	44500	46000	46500	45500	45500	44500	44000	44000	43500
Si Steel Stamping Scrap	46000	45500	45200	45000	44500	44000	45000	46000	45000	45000	44000	44000	44000	44000
Low Ash Met. Coke	47500	47500	47500	47500	47000	46500	47000	47000	45500	45500	44500	44000	44000	43900
Electro-Graphite Fines	95000	92000	85000	80000	80000	80000	81000	81000	77000	77000	70000	68000	68000	68000

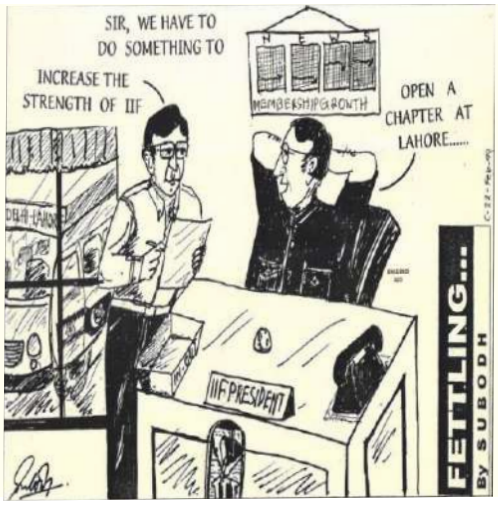
(B) Major Ferro-Alloys {Rs./Kg}

Fe-Si (70-75% Si)	130	130	131	126	122	120	117	115	115	114	115	114	114	113
Fe-Si-Mg (5-7% < Mg)	205	200	210	215	215	215	220	220	220	219	219	218	218	218
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)	220±5	218±5	225±5	218±5	218±5	218±5	222±5	225±5	225±5	225±5	222±5	222±5	222±5	225±5
High C Fe-Cr (60% Cr)	127	127	123	125	122	122	125	125	124	124	124	124	124	125
High C Fe-Mn (60% Mn)	105	105	95	85	85	79	80	82	78	78	78	78	77	77
Ferro-Moly (60% Mo)	2650	2700	2725	2750	2750	2800	3000	3175	3200	3100	3000	2800	2800	2750

Fettling Corner

Perspective of Foundryman

By: Mr. Subodh Panchal
Managing Partner | Kastwel Foundries



FEATURED ARTICLE

By: Mr. Ketan Vavaiya
Director | Plasma Induction (India) Pvt. Ltd

Energy Efficient Melting Solutions

"The more energy efficient we become as a nation, the more we create a sustainable future." The stone age did not end because we ran out of stones, we transitioned to better solutions. The same opportunity lies before us with energy efficient equipment's.

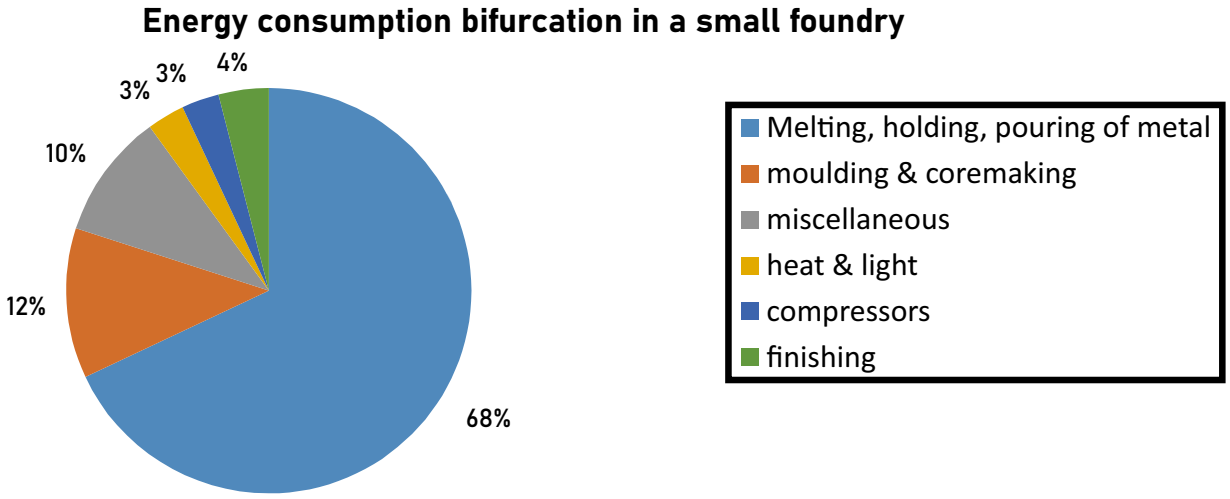
When it comes to deriving efficiency, we foundry men become very meticulous. We try & adopt efficient practices, use efficient raw materials, but somehow the transition rate of replacing old inefficient equipment's with advanced equipment's is low.

The development of Induction furnace has been a boon to the industry.

The first high frequency induction furnace was constructed in year 1916 at Princeton's palmer laboratory. With years of further research & development today we have high, medium & low frequency induction furnaces. Medium frequency furnaces are most commonly suitable & used in foundries.

Similarly, the furnaces developed from Thyristor (SCR) to now **IGBT** (Insulated gate bipolar transistor) – most energy efficient. **IGBT** is nothing but a switching device similar to Thyristor. Having better advantages & operational benefits.

A statistical data shows a specific percentage of energy consumption in a small foundry.



Almost 68 – 72% of energy is used in melting area.

A major amount of energy could be saved in that area by using **"IGBT BASED INDUCTION FURNACES."** Approximately 25-40 units are saved per metric ton of melting metal.

A similar data of cost benefit analysis of using IGBT furnace has been acknowledged by **"BEE – bureau of energy efficiency" – 500kg furnace with 2000 MT / year capacity foundry.**

PLASMA INDUCTION (INDIA) PVT LTD is one of the leading manufacturers of IGBT based Induction furnaces. With a vision to develop a sustainable future, the young passionate team build the best, the most efficient & reliable equipment.

With over 1000 installations across the globe and a fastest growing Induction company in the past decade, PLASMA INDUCTION (INDIA) PVT LTD has emerged as a quality & a trustworthy equipment manufacturer.

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BUSINESS TALK

By: Mr. Mukund Pant
Managing Director | Metal Power Analytical Pvt Ltd

Identity, Value Proposition and Positioning

Pricing – The advanced art of basic business

Every senior executive knows and realizes that nailing the "sweet spot" for price is critical to driving volumes and margins. That said, most take a surprisingly rudimentary and borderline negligent approach towards price-setting. Most firms treat pricing almost as an after-though, typically just totting up the costs and loading a margin over it or leaving it to "direct negotiations" with individual customers.

Avoid cost-plus pricing!

"But our costs are higher than theirs; that's why our product is more expensive". This is something every purchaser has rejected from a desperate vendor at some time or the other. If the logic of "My costs are higher" doesn't convince you to overpay for a product, why expect a customer to accept a "cost-plus" price? This method has the highest chance of leaving you too far above or below the "right" price.

The other thing to avoid is to leave pricing too hazy and dependent on deal-wise discussions. That leads to inconsistencies in communication by different people across the organization and again, loses the Company credibility, while often also relying on a single central person making all decision, leading to unnecessarily slow responses and a single point of failure in the system.

Understand the ground rules

What does "right price" really mean? Quite simply, the right price is the highest amount the buyer is willing to pay for the product or service being discussed. The first thing to observe here is that "cost" doesn't enter the definition! Indeed, the accompanying graphic can be considered a comprehensive set of the factors that drive a customer's willingness to pay.

The first thing for the organization to undertake therefore is a comprehensive analysis to determine the market position of the offering vis-à-vis competition across each of these parameters that is not customer-specific. This requires a comprehensive market map of competing offerings, across features, brand strength, typical terms offered and also how well the competition does in terms of factors such as relationship management, after-sales service etc. Improving the product's standing and relative positioning on these will yield dividends down the line in terms of how much premium (or discount) is required to price the product optimally relative to the market benchmark.

Determining what to benchmark

It is quite apparent that setting the price requires a benchmark – and a benchmark that is taken from the market. For some items this is quite simple. Commodities, for example, have indices and published prices that are constantly updated and always available to all industry participants. In other industries though, it may take a more analytical and data-driven approach to identify the right benchmark.

The first thing though is to understand what you wish to benchmark – and this will depend on what you end up pricing given your business. Some examples are:

Time and effort pricing: In several service industries, pricing involves estimating the time and staffing requirements and then charging. The most common example of this in the current day remains for legal counsels who charge by the hearing or in fixed-fee consulting projects. Here, it's the man-hours, man-days or man-months (by level of the person staffed) that have to be priced and therefore benchmarked.

Outcome-linked pricing: This is typically seen in consulting, banking or outsourcing projects, where fees are linked to benefits delivered by the project. Here, the benchmark is set for the percentage charged.

Usage-based pricing: Typically seen in SaaS industries as well as in corporate law, this typically involves a small retainer or subscription fee, with charges then applying based on usage. The unit usage charge is what you price for and benchmark in this case.

Product pricing: In flat product pricing, you benchmark the whole product itself. This holds for soaps and shampoos as much as for metals and ores, consumer electronics and analytical instruments.

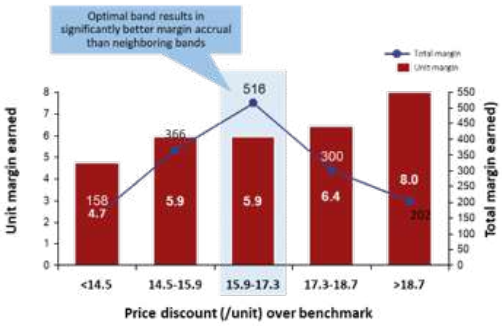
Determine the benchmark itself

If the product in question is a commodity, a simple method is to use the index itself as a benchmark. Thereafter, the price-setting simply involves setting the premium or discount at which you price your offering. However, if the product is not a commodity, and particularly if the product offers some differentiation, whether in features, services or any other aspect, then one needs to find the appropriate benchmark price. The easiest way to do this is to ask, "Which product or competitor are we most often compared to?" From here, identifying the price at which the competitor is selling is a short and simple step. Of course, in a crowded market, there may be more than just one key competitor. In such markets, identifying a price range across the top 2 or 3 competitors may be a better approach.

Setting the premium

Once a benchmark has been defined, the final step is to define the premium (or discount) at which the product will be priced. While there is a temptation to approach this subjectively, a data-driven approach is far more helpful. This involves a few key steps.

- Track price movements of the benchmark vis-v-vis the product over a period of time
- Overlay this price differential with volumes and/or the margin movements for the product
- Assess the "sweet spot" for pricing, which is where margins and / or volumes are highest
- Finally, assess if the analysis also makes sense qualitatively



The images on the side show a real-life example of this kind of analysis. Some caveats however apply on this (for those that wish to understand why the metrics move as they do:

a. This instance involved a commodity where input price fluctuates a lot – and affects unit margins significantly each time it moves
b. The decision-making still focused solely on total margins earned (therefore taking into account the volumes moved) which is the right approach to employ

So what about cost?

While pricing should never take into account the cost of the product, profitability and therefore product cost remains the key focus for any business. Therefore, cost should be viewed from the lens of the price you can command. Once prices are known, the focus of the organization must shift to driving cost optimization in order to achieve margin targets. In summary therefore, the cost-plus approach to pricing is the exact opposite of the optimal approach. Instead of Estimated Cost + Target Margin = Target Price, businesses should approach it as a case of Estimated Price – Target Margin = Target Cost!

FOUNDRY QUIZATHON

By: Mr. Sivakumar Subbarayan
Plant Head | Pitti Castings Pvt. Ltd.

Test your Basics on Melting

Supported By | Shamlax Meta-Chem Pvt. Ltd.

Quiz Prizes Supported By

SHAMLAX

Last Date of Submission: 28th November 2023

1) Normally % of Si maintained in malleable iron

a. 0.4% - 0.6%
b. 0.8% - 1.5%
c. 1.5% - 1.8%
d. 1.9% - 2.2%

2) Addition of Indium in Al-Si alloy gives

a. Tensile strength
b. Wear resistance
c. Ductility
d. Corrosion resistance

3) Microstructure of Eutectoid steel

a. 20% ferrite, 80% pearlite
b. 100 % pearlite
c. 100% Ferrite
d. 80% Ferrite, 20% Pearlite

4) Which of the following is a light metal?

a) Copper base
b) Lead base
c) Nickel base
d) Magnesium base

5) Which of the following types of iron represents purest form of iron in the manufacturing process?

a) Pig iron
b) White cast iron
c) Wrought iron
d) Grey cast iron

How to Participate in the Foundry Quiz:

Option 1) Scan the QR Code to Start the Quiz and fill out the basic details, click next, answer the questions and then click on submit

Option 2) Send answers to the following questions on western.region@indianfoundry.org with basic details (Name & IIF Membership No.)

Winner will be based on first one to answer the maximum correct answers

Click Here

QUIZ WINNER!

Congratulations to
Mr. Dilip Gehlot
Sethi Metals Industries

80% Score

For securing the first position in Foundry Quizathon on the topic: Molding. He will be awarded with the NCTS voucher worth Rs. 750/-

2nd Position (60% Score)
Mr. Mahendra Desai

Foundry Quizathon (September Edition)
Answer Key: **1. a | 2. c | 3. a | 4. d | 5. a**
To view the following quiz questions,

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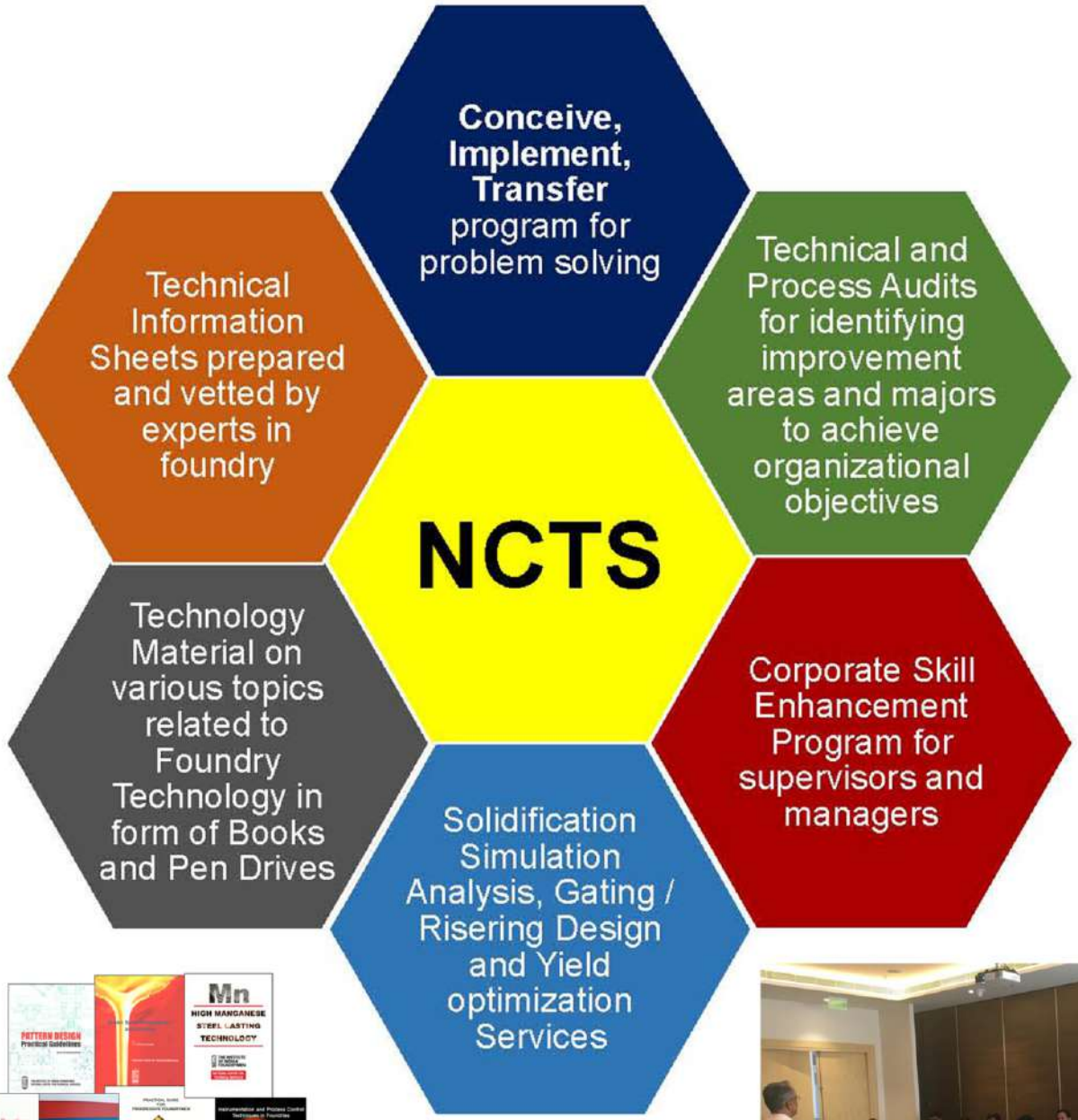

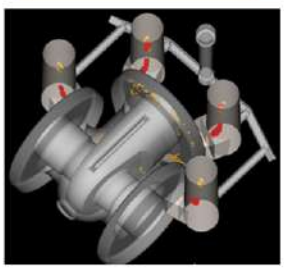

Mob. 9403871063, T. +9120 - 2542 2902.E. ncts@indianfoundry.org, www.iifncts.org

Message from Chairman IIF Greater Mumbai Chapter

It's my privilege to be part of IIF and am glad that I have been given this opportunity to express my views in the Foundry Talk magazine on behalf of our industry.

Though the industry is running on a slow pace due to many factors , but this is always a temporary phase.

However the festival of light "Diwali" is approaching soon and may this festival illuminates our industry and give us power to overcome tough times and together scale to new heights.

Mr. Sudeep Shah
Chairman IIF Greater Mumbai Chapter

Despair of major challenges and roadblocks faced by Foundry Industry , our nation has surpassed US and ranked 2nd in Casting Production . With development in industries like infrastructure , construction , railways , automobiles to name a few and government interventions and different schemes will boost the industries growth and help in building our nation .

I believe that there is no short cut to achieve business goals with values like moral, ethics, honesty etc. I strongly believe in hard working, delivering promised work to customer and giving preference to customer satisfaction in achieving business success.

Let us all believe in our Prime Minister Modiji's mantra of "Make in India " and expand our horizon worldwide.

I want to offer my best wishes to the entire foundry industry to strive hard to scale upwards. I also wish Western Region Chairman Prayut Bhamawat and his team a great success for forthcoming event WESCON 2023 on 24th & 25th November and all luck for future projects."

Wishing you all the best.

WESTERN REGION ACTIVITIES



ESG seminar @ Kolhapur Chapter






Work Visit from Coimbatore Chapter hosted jointly by WR & Kolhapur Chapter

Event Sponsors
CARBON
Net Zero For Net Gain

IIF Western Regional Conference
Wescon 2023
...GET FUTURE READY

24 -25 November 2023
Venue:
Hotel Deltin, Daman (Vapi)

Program of WESCON 23

Day 1: 24 Nov 23	
10:00 AM to 11:00 AM	**Registration & Welcome Tea**
11:00 AM to 12:00 PM	**Inaugural Function**
12:00 PM to 01:30 PM	**Session 1:** Ux - User Experience, session by the Foundrymen
01:30 PM to 02:30 PM	Lunch
02:30 PM to 04:30 PM	**Session 2:** My Foundry My Passion
04:30 PM to 05:00 PM	**Hi - Tea**
05:00 PM to 06:00 PM	**Session 3:** KBSC - Kaun Banega Super Chapter (Quiz)
07:30 PM Onwards	**Networking Dinner**
Day 2: 25 Nov 23	
09:30 AM to 11:30 AM	**Session 4:** Foundry Sustenance
11:30 AM to 12:00 PM	Break
12:00 PM to 02:00 PM	**Session 5:** Business Opportunities
02:00 PM Onwards	Valedictory cum Lunch

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For any queries kindly contact Mrs. Aarti Ghag - Senior Officer IIF WR at western.region@indianfoundry.org

The Institute of Indian Foundrymen

Greater Mumbai Chapter & Western Region

presents

One Day Seminar on

CLEAN MOLTEN METAL for QUALITY CASTINGS PRODUCTION

On Friday, 8th December, 2023

Time :- 9:30a.m. to 6:00p.m.

Venue: HOTEL SEA PRINCESS JUHU, Mumbai – 400049

Organised by : The Institute of Indian Foundrymen

706, Madhava, Bandra Kurla Complex,

Bandra (E), Mumbai – 400051

Tel : +91 22 26591308 / (M) 7303511171

Email: iif.mumbai@gmail.com

PLANNED PRESENTATIONS:

- **Origin & Occurrence of Metallic & Non-metallic Inclusions in Castings and its impact on Casting Quality – By Mr. Subramaniam Sundaram, Ex. Dy. General Manager, (Foundry), Tata Motors Ltd., Pune.**
- **Effective Design of Gating System for Clean Metal entry into Mould Cavity – By Mr. J. V. Patankar, Technical Director, MPM Ltd., Nagpur.**
- **Molten Metal Filtration Technology, Filter types, Grades, Specifications & Selection of Filters – By Mr. Nitin Patil, Solution Manager, FOSECO India Ltd., Pune.**
- **Foam Filters – Types, Specifications & Applications with some case studies + Mini Risers Technology – By Mr. Kunal Gokhale, ASK Chemicals, Pune.**
- **Some experiences of using Filters & Benefits of Usage – By Mr. Santosh Rangrej, Head – Kagal Division, Menon & Menon Ltd., Kolhapur .**
- **Ceramic Molten Metal filters in Automotive Castings production – By Mr. Amar Patil, GM – Manufacturing (Auto Division), Mahindra & Mahindra Ltd., Mumbai .**
- **Experience in using Ceramic Filters in Cleaning Aluminium - Alloy in Foundries - By Mr. Girish Vispute - FUNTECK, Pune.**
- **Experience in use of Ceramic Molten Metal filters in Aluminium Castings -Some case studies - By Mr. Mehul Shah - Superkino Equipments Pvt. Ltd., Umargam.**

Delegate Registration Fee: * Rs. 2,000 (Plus 18% GST) = Rs. 2,360/- per Delegate

(Please Register and Pay for 1 Delegate & Get 1 Additional Delegate Registration Free)

Online Registration can be done at :

http://www.iifwr.com/chapter.php?chapter=Greater+Mumbai+Chapter

THE INSTITUTE OF INDIAN FOUNDRYMEN
SOUTHERN REGION

72nd Indian Foundry Congress, Cast India Expo, Lost Foam Casting India Expo & IFEX 2024

This event is a Three-Day Integrated Conference and Exhibition being held at

Bangalore International Exhibition Centre (BIEC), Bengaluru, Karnataka, INDIA on 2nd, 3rd & 4th February 2024

Unleashing

IFEX 2024

- Latest Foundry Equipment & Foundry Materials
- Furnaces & Accessories
- Moulding, Core making, Knockout & Finishing
- Measuring, Testing, Process control & Instruments
- Robotics, Automation & Industrial IOT
- Foundry services & Environment control eqp

Casting / Component Display of

- Aero space, Defence, Railway
- Non ferrous Components
- Auto mobile & Diesel engine components
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- Pumps, Valves & Other engineering sector

cast india expo

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Lost Foam Cast India Expo

- Live demo of LFC Casting manufacturing process
- Raw material suppliers for LFC Process
- LFC Equipment's suppliers
- Lost foam Castings display

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mumbai@dts-india.co | 1800-22-8522 | www.dts-india.com | Location: Mumbai

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We, at Gargi, are committed to developing, manufacturing and supplying foundry consumables and chemicals conforming to international standards. We deal in Resins, Coatings, Exothermic Sleeves & Other Foundry Chemicals. Our priority is total customer satisfaction by anticipating and meeting the changing needs of our customers.
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Incorporated in 1994, Kelsons Engineers & Fabricators is a well-known manufacturer and supplier of Moulding Machine, Intensive Mixer, Shell Moulding, Shot Blast Machines, Foundry sand Testing Equipment, Metal testing Equipment and Ladles providing full range of equipment for foundry processes. We provide turnkey solutions for foundry sand plant projects
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mehtapmet@gmail.com | +91 9327308669 | www.p-met.com | Location: Vadodara

Porwal Auto Components Limited a listed company on BSE is one of the leading foundries in India with in house machining facility, it is an ISO 9001: 2015 and IATF certified unit. We are certified Class "A" Foundry by RDSO & approved by IRIS (International Railway Industry Standard). We are major supplier to Auto Mobile and Tractors, Railways, Defence and heavy engineering sectors like BHEL etc. Our products range covers Grey Iron, Ductile Iron, Carbon Steel, WCB and Austempered ductile iron (ADI) and casting weight from 1kg and 800 kg.
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