

## Points to Ponder!

# Improving Profits in Foundry Business

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*In Business Transactions, Profit is a necessity, because it makes the Fortune. So if Business is to be carried forward, one has to work for Profit, otherwise the Business may be moving forward towards closure! No matter what the business did in the past, it is the present which counts. Main objective of a Business entity has to be "in PROFIT"; Foundry Business not being any exception. This "Hot Issue and Buzz of the Day" for the Foundry Industry had been deliberated upon by us in our Article: "Foundry Viability – The Indian Scenario"; which appeared in May/June, 2015 issue of 'FOUNDRY' magazine. Readers are requested to go through the Article once again. However, as a quick go through, relevant short summary of salient points from the Article (also brushed up further) are given below for the Readers to ponder about.*

*(\*The Article in May/June,2015 issue was Authored jointly by Shri G. Srivastava, Shri R. C. Kothari, and Shri M. K. Bhamawat.)*

### Short Summary of the Previous Article

- In a span of last 50 years, Prices of **Castings** have increased by approx. 35 times over the period, and so have the **Input Costs** – Costs of Raw Materials, Consumables and Human Resources. As such, there should not have been any cribbing about *Reduced*

*Profits/Margins.* There is, however, a lone exception to this statement; which is "**Power and Fuel Costs**", which increased in this period by 100 times (about 3 times more than other costs)! *(The Tabular Data appearing in the above-mentioned Article is reproduced below for Ready Reference to the Readers.)*

**Table**  
**Price Variations during Past 50 Years\*\***

Item	Unit	Rate/Unit (Rs.) 50 Years Back	Rate/Unit (Rs.) At Present	Increase (Ratio 'D/C')
(A)	(B)	(C)	(D)	(E)
1. Steel Casting***	kg	2.00	70.00	35
2. Steel Scrap	kg	0.75	29.00	39
3. Silica Sand (Allahabad)	kg	0.10	3.20	32
4. Furnace Oil	litre	0.35	35.00	100
5. Petrol	litre	0.65	65.00	100
6. Electrical Energy	kWh	0.07	7.50	108
7. Labour Unskilled	monthly wage	200	7,000	35
8. Labour Skilled	monthly wage	250	10,000	40
9. Fresh Engineer	monthly salary	300	12,000	40

\*\* This Table appeared on page 33 in May/June,2015 issue of FOUNDRY.

\*\*\* Plain Carbon Steel Casting, for general engineering application, job work. (Weight Range : 200-500 kg single piece).

### Notes

1. These figures are generalised average rates and considered for comparison sake.
2. The figures are for jobbing **Steel** foundry. The trends in **Cast Iron** and **Non-Ferrous** foundries are also likely to be similar.
3. It is likely that the prices of Castings and Inputs got doubled every 10-12 years, whereas Energy & Fuel prices doubled at shorter intervals probably every 6-8 years.

- It shows that Costs and Realisation had been matching, except for **3 times** Ratio increase in “**Power and Fuel Costs**”, compared to other inputs. This has created a situation of lower contribution, affecting Profits.

No doubt, consumption matrices of Energy and Fuel cannot be brought down to 1/3rd by any methodology, to bring all matrices to a level field – Process necessities having high fixed requirement. But, in any case, serious efforts have to be made in saving in this area as much as it can be done; and will contribute the most, making efficient use of ‘Juice’. Even the so called efficient Foundries in India are over-consuming Energy to an extent by around 25%, in some cases even 50% (*a Sad Story!*).

- As such, **Energy consumption** becomes FIRST Area of Attention for all the stakeholders. Benchmarks should be set and worked upon. Innovative methods have to be evolved, rather than living with the consumption figures, accepting them as a fact of life.
- Foundry Industry is at the **lowest/start Point** of the supply chain of the industrial applications of Castings. It makes the realisation of the produce of Foundries quite vulnerable. Side by side, the Market has become highly competitive – over-capacity compared to demand; and demand also had remained cyclic.

### Three Major Issues

**Improving Profits of Foundries** – the theme of this deliberation – has become a big issue at the moment. To get into the Root Causes of not making sustainable profit, Foundry stake-holders have to keep in mind that they (particularly stake-holders of Indian foundries) are bogged down by three major vertices or issues.

#### 1. Overcapacity

It created a situation of low orders for individual capacities. Due to Industrial growth, just after Independence, there was a spurt in demand of Castings, and many people ventured putting Foundries for meeting this deluge of requirements, even increasing capacities. But that demand saturated over a period of time, leading to over-capacity.

#### 2. Low Realisation

No doubt, because of the situation stated above, as also due to castings being at the “**lowest end of supply chain**” of industrial scenario and requirements. Raw Castings go at the first entry point in the production stages of industrial products, generally being machined and used in assemblies or as spares. It can be put on record that fate of

**Foundries** is almost the same as that of **Farmers**. (Please refer to a recent Article: “**Foundries & Farms – Two Different Pots (apparently Poles Apart!.. Yet Similar)**”, published in 66th IFC’s printed Book ‘**Journey to the Centre of Melting Pot**’, page nos. 35-39.)

*But the Farmers have MSP (Minimum Support Price) of their produce as a support, while there is NO FREE OR SUBSIDISED LUNCH for the Foundry.*

### 3. Low Margins

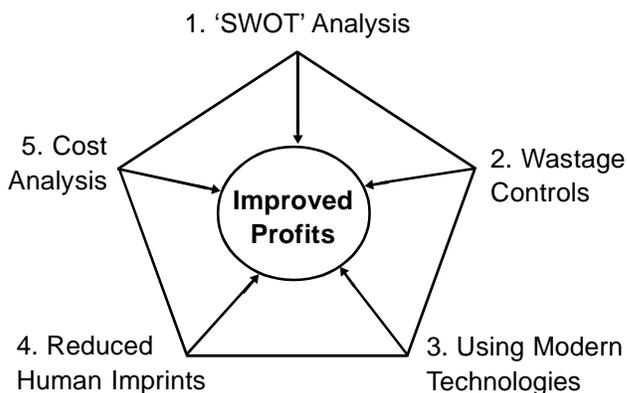
As a consequence of combined effect of above two issues, Foundries do not have bargaining power.

Foundry Owners/ Stakeholders have no other alternative, but to be cost-conscious and being competitive (*I repeat again, “being competitive”*) for survival. Their this endeavour will lead to increasing PROFIT MARGIN, and the Author feels that it is still possible – of course, a **tough** journey. To combat the issue of low, or even almost NIL, contribution; Foundries have to be serious enough, to come out of the woods.

### Road Map for Improving Profits

The Author has worked out, as of now, a practically possible **Road Map** (pentagonal in shape) having a peripheral area of 5 Vertices. There will, of course, be many more parameters depending on the working of any individual Foundry, but most common and important 5 parameters have been chosen.

1. A full scale **SWOT Analysis**, particularly the Threats, pointing out areas needing maximum attention.
2. **Reduction in Wastages** in all areas of operations – even manpower. Unfortunately, this is the biggest ill in Indian Foundries today. ‘*A small leak will sink a great ship*’. One cannot afford to have holes in the pocket. So be careful, and act fast to plug the holes.



**Fig.:** Important Parameters for Profit Improvement

Two Examples :

- In Foundry parlance, “**Yield**” is an important factor, and Foundries have to constantly work for increasing **yield**.
- **Energy** is another area where a good amount of saving can be done. Just for information to all of us, theoretical energy needed in Induction melting (heating the charge to melting temperature + latent heat of fusion + super heat) is *much lower than* the Total Energy being used; calling for use of more efficient furnaces and/or melting operations.

Readers are requested to get ideas put up on this issue in an Article on ‘**Innovations in Foundries – Major Focus: Elimination of Wastages**’ published in ‘**FOUNDRY**’ magazine (*July/ August, 2017 issue; page nos. 11-17*).

**3. Using Modern Technologies** and Practices for increasing Productivity. Unfortunately a good number of Indian Foundries are still continuing with old practices, while the world over these have been replaced by better machines, robotics and even better binders; or even totally different moulding processes, like Vacuum Moulding, Lost Foam Moulding process etc.

No doubt, switching over to modern technologies may turn out to be a costly affair, but it is needed. We must appreciate that Chinese Foundries have become quite advanced in a short span, obviously realising the advantages being gained. We, in India, have a burning example of Textile Mills (continuing with old systems) closing down. A fresh input of Capital is required, but it is a **must**, and a Separate Corpus needs to be created. Of course, “Cost:Benefit Analysis” needs to be carried out before switching over to any new technology.

**4. Replacing ‘HUMAN’ interface with Technology**, wherever advisable. It will also take care of inconsistencies in castings, caused by unavoidable, unknowing and unintentional human errors.

**5. Cost Analysis** : A clear and true Direct Cost Calculation mechanism for items being produced. ‘Direct Materials Cost’ has to be **less** than ‘Selling Price’ – a positive contribution being mandatory – come what may. Many a times Foundries, just to grab an order, quote prices defying this rule, and suffer badly – *getting into the web of “the more you produce, the more you lose”*. For this, an authentic and fairly accurate Direct Cost data should be there. It should be easily available and understandable, and be

reviewed and updated almost every month. It can signal out the black sheep and will point out the issues which need immediate attention.

## Improving Profit in Foundries

Apparently all these are known to most of us, and are not new! But one has to refresh himself/herself, and for this Foundries have to look sharp, set goals and stay firm to get over the din. As per the information/ present status available, “*a Party is getting over in many Foundries*”, and to get out of this rut, Foundries have to have a **Road Map** first, and then get going. *It is just to repeat again that there is no ‘Silver Bullet’ for a sustainable solution*. By focusing on the above-mentioned **Road Map**, however, one can create a solid ground of Confidence, Commitment and Conviction – 3 Cs needed for a comfortable situation.

*Bill Gates* once addressing for rejuvenation (in our case, increased viability), indicated desired characteristics – *Committed, Ambitious and Vital (Vital in this context meaning Engaged, with responsibility)*.

We must take it with a pinch of salt that Foundry operations are to be treated as a **marathon**, instead of a short sprint. *Knee Jerk actions are not going to help*. Take a ‘Slow but Steady step’ approach – like in a Marathon. Give each step/action planned a deep thought, and then take firm steps, one by one, to reach the goal. After all, any ‘Journey’ starts with a firm and a steady step. The Foundry has to develop its own team of Commandos, fully capable and competent who can dig deep for a really True Picture, and then they work for the Remedial Actions, creating internal projects. As they say, Circumstances do not make a man, they reveal him.

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***Out of difficulties grow miracles.***

***– Jean de la Bruyere***

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It may not be out of way to put it on record that **Outside Help** will more than compensate the expenses in terms of the contributions made by such help. The situation within the Foundry is such that Executives remain busy with their daily routine work and imbibe a *Tunnel Vision*, knowingly or unknowingly. A second opinion/advice from an outside expert takes care of this.

As it is, Foundry (Founding) is a complex Technology, without any exacting single Science. The process does not come out with a perfect solution, and the best one can have is least numbers of ‘Evils (i.e. non-conformances) in the produce – Castings. Selection of

Process and its Surveillance, as such, becomes a burning issue, where such outside help comes handy.

It has been observed that, if permitted to submit, there is always a sense of Complacency in Organisations, and to get over this, 'Outside Help' comes as a **watch dog** in curbing it. It also helps in setting goals and reaching them. In this environment of competition the factual position is: *'There are many Trees in the Wood, but once upon a time there were only one. Today it takes a lot of work to keep that old tree standing'*. One should not mind it. The Generals shouldn't be in trenches.

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***Progress is impossible without change, and those who cannot change their minds cannot change anything.***

**– George Bernard Shaw**

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Life is meaningless without a goal. Set a goal, and then start the beautiful journey towards its attainment; carving out the path amidst the obstacles with self determination and focus on the goal. Setting goals is the first step in turning the invisible into the visible. Side by side, 'Every success changes the Goalpost' – a philosophy the Foundries have to follow for improvements. Never stay in Comfort zone, have something brewing in mind to work on.

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***Arise, awake, and stop not till the goal is reached.***

**– Swami Vivekananda**

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## **Team Spirit**

One more point in improving the Profits is to have an enlightened **Team Spirit**. There are evidences of leg pulling, blame game, lack of ownership. Top Management has to take care of this, rather than working on 'Hearsay', which is probably true in most Organisations – Foundries not being an exception. Team Spirit goes by the theme: *'A Village rears the Child'*, and it should be fully optimistic. Pessimism leads to despondency, but optimism can augur **better future**.

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***Failure is not fatal, but failure to change might be.***

**– John Wooden**

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The Author would also like to add that there was a time when Indian Foundries were ahead of the Chinese ones. But during last about two decades, Chinese Foundries have gone ahead by virtue of Modernisation, and Adoption of Newer Technologies. No doubt, the underlying logic for a faster unusual growth of Industries

and Businesses in China has been that it first used protection and subsidies, including low cost Capital to create enormous factories, reaping scale economies that soon made it a very low-cost global hub of Production.

Indian Industries would, following this strategy, say that they want to follow similar path, and will give up protectionists' duties once they become competitive. But, to the policymakers, there is no guarantee of such a happy outcome, given Indian policy interventions that make its Land, Labour and Capital more costly – the latter more particularly – than in Global competitors; a handicap otherwise due to State Policies and Politics. The infant industry argument was used just after Independence in the era of import substitution, which is not there anymore. Far from creating 'low cost, competitive industries', we have created 'high-cost, incompetent ones', probably due to complacency imbibed.

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## **Concluding Remarks**

We cannot change what has happened in past, but it is never too late to have **new** beginning. Life is tough, but tough times too pass if we put dedicated efforts to face them. Take small steps at first, so that one can taste his first success and believe in himself that he can do it. *That was what prompted Barak Obama to come out with "Yes, we can."*

Tragically, many of the Foundry Owners and Executives seem happy to plough on with more of the 'SAME', though listening to warnings without change – following the adage 'old habits die hard'. They, though listening about new Technologies, however, if permitted to put on record, have a fundamental "lack of understanding and appreciation for the emerging advantages". For increased Profitability, they will have to change the status quo and question the present and past, and have to behave like **Start-Ups**, rather than lumbering giants.

Also, they must understand that majority of missed opportunities are within, and do not have to look elsewhere, like a Musk Deer, who inspite of having the 'Kasturi' within, keeps on searching it all around. Also please keep in mind that it doesn't matter what the colour of the cat is, as long as it catches the mouse – the mouse within the premises of the Foundry.

**The Message is: Reform, Transform and Perform.**

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***You can't cross the sea merely by standing and staring at the water.***

**– Rabindranath Tagore**

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**"NEVER GIVE UP."**

– An inspirational Quote from **Dr. Stephen Hawking** (probably well known to all of us, who lived upto 76 years in spite of a crippling disability), aptly applies fully to us – the Foundrymen.

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**Post Script**

The Author has tried to put a MIRROR in front for all the stake holders – Owners, CEO's and People working in Foundries – putting forward the areas where, if taken seriously, 'Improving Profits in Foundries' is feasible. He might have made a *damaging report* for most of us, and would like to say 'Sorry' if the deliberation has offended some. But the cat needs to be brought out of the bag.

He earnestly **requests** all Readers to kindly go through the Text "word by word" for a clear understanding and to get motivated, and make their individual Road Map for the Objective discussed about. After all, Challenges are what makes life interesting, and overcoming them what makes life meaningful. *In any case Passion and Patience will PAY – two P's for one 'P'.*

*Comments and Feedback from  
elite Readers are welcome.*

