

Dynamic Foundry Group's Meet for Networking & Knowledge Sharing

8-9 April, 2017

Vadodara & Vallabh Vidyanagar (Gujarat)

Around 45 members of "Dynamic Foundry Group" on Telegram had met for 2-days at (i) Vadodara (on 8-4-2017), and (ii) Vallabh Vidyanagar i.e. V.V. (on 9-4-2017) in Gujarat. This was a Networking-cum-Knowledge Sharing Meet.

The Group Admin **Shri Sandeep Kulkarni** and a cohesive team from among the group members had made detailed planning for the entire 2-days programme, as also for logistics of travel, stay and movements. Local **host team** (also from among the group members) under the leadership of **Shri R. C. Kothari** had made elaborate arrangements for comfortable stay, efficient conduct of programmes, and travel. The 2-days programme consisted of 10 Technical presentations, three works visits, some equipment/process demonstrations, and good interaction among the members. A quick Survey on "Present Problems in Foundry Industry" was also conducted just before Dinner time on the first day. Highlights of Survey findings appear in this issue. **The programme highlights appear below.** (*Excerpts from Technical and other presentations will appear in the next issue.*)

8th April, 2017 (First day)

VCCI Hall, GIDC Makarpura, Vadodara

09.30 - 10.00	Registration-cum-Networking, with Tea
10.05 - 10.10	Welcome by Shri Prayut Bhamawat (local host team)
10.10 - 11.25	FRP – Foundry Resource Planning software (Important Highlights) – presentation by <i>Bhushan Bhatt, Auto-Design-Online, Vadodara</i>
11.25 - 13.00	Foundry Profitability Study – presentation by <i>Sandeep C. Kulkarni, Kolhapur (Group Admin)</i>
13.00 - 14.00	Lunch
14.00 - 15.00	"Automation & Robotics Supports" in Modern Green Sand Moulding Operations – presentation by <i>Pioneer Process Automation Pvt. Ltd. & Kuenkel-Wagner India Pvt. Ltd., Vadodara</i>
15.00 - 16.00	Lost Foam Casting – Process Details (from development to dispatch) – presentation by <i>G. D. Mishra, Foundry Consultant, Pune</i>
16.30 - 17.00	Works Visit to Patel Furnace & Forging Pvt. Ltd. (Shot Blasting Division), Vadodara
17.15 - 17.45	Works Visit to Kuenkel Wagner India Pvt. Ltd., Vadodara Plant
20.00 - 22.30	Get-together, Quick Survey on "Present Problems in Foundry Industry", followed by Dinner

9th April, 2017 (Second day)

Vitthal Udyognagar (i.e. VU), Vallabh Vidyanagar

10.40 - 11.40	Works Visit to Rhino Machines Pvt. Ltd., Vitthal Udyognagar (MultiFlex FM 12 MP SA Automated Moulding Line (demo operation), Sand Testing Facilities, Demo of Sand Reclamation Plant, RMC 10 Rhino Mixer-Cooler, HSQ Hydro Sq... Moulding Machine)
11.40 - 12.40	3-D Printing : Possibilities & Technologies – presentation by <i>ThirdinRev team (in Skill Development Centre Seminar Hall)</i> Realtime Data Acquisition & Analysis – presentation by <i>Ecolibrium Energy & Rhino team (in Skill Development Centre Seminar Hall)</i>
13.00 - 14.00	Lunch
14.20 - 15.00	Efficient Way of Induction Melting Operations – presentation by <i>Shyam Kulkarni, Pune (in VU Industrial Estate's Auditorium Hall)</i>
15.00 - 15.30	Eco-friendly Melting of Cast Iron in Cupola and Duplexing in Induction Furnace – presentation by <i>Dr. V. P. Gupta, Chandigarh (in VU Industrial Estate's Auditorium Hall)</i>
15.45 - 16.45	Systematic Process of Development of New Castings in Cast Iron & Ductile Iron – presentation by <i>A. M. Deshpande (in VU Industrial Estate's Auditorium Hall)</i>
16.45 - 17.45	Expectations from Industry Associations – <i>Interactive Session by Shri Amish Panchal (Vice President, IIF) (in VU Industrial Estate's Auditorium Hall)</i>

The event was supported by Kastwel Foundries, Rhino Machines Pvt. Ltd., Patel Furnace & Forging P. Ltd., Kuenkel Wagner India Pvt. Ltd., Wear Fighters, and Auto-Design-Online.

Form **A**

Format used for the Survey during Dynamic Foundry Group's Meet
at Vadodara (on 8-4-2017) & Vallabh Vidyanagar (on 9-4-2017)

Survey of Present Problems in Foundry Industry

 **(Feedback from Foundrymen)**

Your Name :	Mobile No.:
Company Name :	Phone No.:
Email Id :	

Metals Cast : Grey Iron / S. G. Iron / Steel / Alloy Steel / Al-Alloys / Cu-Alloys / any other (name) (Please Tick)

Present Monthly Production (tonnes) :

Production Capacity (tonnes/month) :

Problems : Please select Problems **disturbing you the most** (max. 5) from the List below.

Tick mark (✓) these, indicating Priority numbers 1, 2, 3, 4.... as per their severity **perceived by you**.

Business related	Supplies related	Process related	Others
Less Orders (Less Load)	People not available (Supervisors / Workers / Managers / Consultants)	High Rejection (overall or in some castings)	Pollution-related Problems
Delayed Payment (hence, Poor Cash Flow)	Tooling (Patterns / Corebox Quality)	Melting Operations	Sand Re-Use (after Reclamation)
Finished Castings (Pile Up of)	Raw Materials (Inconsistent Quality)	Moulding Operations	Used Sand Disposal
Sales Price (Very Low)	Energy Bill (High)	Core-making Operations	Any Other (please name)
GST (poor clarity)	Sand (Quality & Supply)	Fettling Operations	Any Other (please name)
Finance (shortage)	Equipment (Poor Performance)	Process Test Results & Data (How to use?)	Any Other (please name)

Please provide more information (max.15 words each) about the **most acute two problems** indicated 1, 2 by you.

One more form (Form-B) was used for Survey about the "Strengths & Weaknesses of Foundries at present", as perceived by (i) Foundry Consultants, (ii) Suppliers to Foundries, and (iii) Castings Buyers. That Form was simple. It is not highlighted here.

**Result of Survey among Dynamic Foundry Group's Members about
Problems Foundry Industry is facing at Present**

30 Members provided feedback in Form "A", designed for this Survey

Summary of Survey Findings

Problems Listed in the Survey Sheet (for each participant to select problem(s) applicable to his/her foundry) (maximum 5 Problems were to be selected)	Problem(s) identified by Group Members being experienced by them (marking Severity Level from 1 (i.e.worst) to 5)						Total Score (total of all 5 severity levels)
	1	2	3	4	5	(without number)	
1. People (shortage at all levels)	12	1	2	–	1	1	17
2. Less Orders (i.e. less work load)	3	3	3	1	2	1	13
3. Energy Bill (rapidly rising)	1	1	3	1	1	2	9
4. Delayed Payment (i.e. poor cash flow)	1	5	–	–	1	1	8
5. Castings Sales Price (low/very low)	1	3	2	1	1	–	8
6. Raw Materials (quality inconsistency)	–	1	–	2	1	1	5
7. High Rejection (of Castings)	3	2	–	1	–	–	6
8. Pollution -related problems	–	2	1	–	1	1	5
9. Finished Castings (Pile-up)	2	–	–	1	1	2	6
10. Patterns/Coreboxes (poor quality)	–	–	–	1	–	–	1
11. Production Eqpt. (poor performance)	–	1	1	1	1	2	6
12. Process Record-keeping (ignorance)	1	1	1	1	1	1	6
13. Finance (shortage)	–	1	–	2	–	1	4
14. Sand (supply & quality)	–	1	1	1	1	2	6
15. Sand Re-Use (after reclamation)	–	–	1	–	1	1	3
16. Used Sand Disposal	1	–	1	3	2	2	9
17. Melting Operations	–	–	1	–	–	1	2
18. Moulding Operations	–	2	–	–	–	2	4
19. Core-making Operations	–	–	–	1	–	–	1
20. Fettling Operations	2	1	3	1	1	1	9
21. GST (Poor Clarity)	–	–	–	–	–	–	–
TOTAL	27	25	20	18	16	22	128

Few Problems (other than those Listed Above) were identified by Group Members.
Survey was conducted by M. R. Shah (Editor, FOUNDRY magazine) on 8-4-17 at Vadodara

Dynamic Foundry Group's Feedback about Strengths & Weaknesses of Foundries at Present

– As perceived by (i) Foundry Consultants, (ii) Suppliers to Foundries, and (iii) Foundry Customers –

Strength: Keen desire and commitment is a winning point of large cross section of Indian foundries

Weaknesses: (i) Mindset of the Owner or the Technocrat: He is very clear of his expectations, but does not respect the needs in changed scenario of his work force – for example, foundry environment, employees' remuneration, respect & dignity to the work force. (ii) Shortage of Trained & Motivated People

– R. C. Kothari

Weakness: More emphasis on Profits, and poor emphasis on real Technological thinking.

– Dr. V P Gupta

Weaknesses: (i) Not able to negotiate with castings buyers. (ii) Not knowing trustworthy cost estimation of the castings they produce.

– Amish Panchal

Weaknesses: (i) Owners take more interest in Equipment purchase and Price negotiations, but do not give any importance to Training of People about "effective use of the purchased equipment". (ii) Regular in-house training missing in most foundries.

– G D Mishra

Weaknesses: (i) Absence of Benchmarking or Data on Process/ Production/ Performance to evaluate actual position. (ii) Little Focus on "Human Capital".

– Manish Kothari

Weaknesses: (i) Foundry management is reluctant to new technology & digitisation. (ii) Foundrymen are poor in cost estimation. They do not use process simulation to save money. (iii) Supervisory and Engineering people spend less time on Shop-floor, but spend maximum time in Office & Meetings.

Suggestion: Use of Computer and Software is essential to attract new generation to metalcasting field.

– Bhusan Bhatt

Weaknesses: (i) Most foundrymen do not want to change mind set (ii) Payment is Poor

– M K Bhamawat

Weaknesses: (i) Poor Financial management (ii) Poor focus on Quality

– P A Patel

Weaknesses: (i) Acute shortage of Skilled Manpower (ii) Poor awareness about Technology / Quality Vs. COPQ (i.e. Cost of Poor Quality)

– Hemant Chauhan

Weaknesses: (i) Data keeping & analysis is poor. (ii) Poor interest in power/energy savings.

– Shyam Kulkarni

Strength: Plants normally have New equipments

Weakness: Poor Methoding

– Arvind Deshpande

Strength: Availability of Men, Machines and Materials; Easy to start a foundry

Weaknesses: (i) Fluctuating castings demand, and (ii) high interest rates

– Pravin R Joshi

Strengths: (i) Spare production capacity is available. (ii) Supply is available at low cost.

– V K Vaid

Problems related to Sand Supply: (i) Suitable Raw sand source to produce Resin Coated Sand is located far away, hence (ii) Landed sand cost is very high.

– Manohar Raibagi

Valuable Suggestions by Shri R. C. Kothari to overcome Foundries' Weaknesses

1. Creating Good Mindset

Creating "Awareness Programme" to Foundry Owners is the **first** requirement. The owner must be receptive – a good listener, a good team builder, with a large heart. A programme of "creating good mind set" is the essential need.

Obviously now the owner will look forward to the Value for money, and so the second need is **trained & skilled manpower** for good deliverance.

2. Training & Motivating People

Good training orientation in respective field with hands-on training, with at least 6-8 months **internship** should be provided. Then the fresh employee(s) can give value for money to the foundry owner.

So the next question is simple & clear:

3. Who will foot the bill?

This means who will pay for the 2 years of effort to build a right work force? It has to be a definitive, skill building core strength, well defined & well designed courses.

A Corpus Fund has to be created, with long term planning, with its management in **dedicated hands**.