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## COO SPEAKS



Shirish V. Divgi

*Heartiest Invitation from Ferromatik Milacron India for  
**OPEN HOUSE** in OCTOBER 2012 (Tentatively 2nd week)*

**1st & Largest**  
India Built High Performance  
Injection Moulding Machine  
**3200 T**

&

**New Generation**  
Energy Efficient & Small Tonnage  
Injection Moulding Machine  
**50 T to 200 T**

**D**ear Friends,

Our newsletter has truly taken its shape and the content of the same have been well received. Few of the readers have expressed their desire to address Guide to Surface Defects on Thermoplastic Injection-Moulded Parts. Our team has taken note of it and has started a new section for the same from this issue onwards for your kind information. I hope it will be helpful to you.

As a leading Injection Moulding Machine Manufacturer & Exporter in India, we are committed towards offering the best in terms of Innovation, Quality,

Delivery & Value. This is how we would like to present ourselves in the market-Dynamic, Growing & Global. Our success is based on our Customers, Partners and our People. We are known for our Professionalism, Business Ethics, Superior Technology, Quality, Reliability & Commitment to After Sales Service.

Our participation in last few exhibitions, Plastindia 2012 at New Delhi, 8<sup>th</sup> Die & Mould India 2012 - International Exhibition at Mumbai & Plastivision Arabia 2012 - International Plastics Exhibition at Sharjah, UAE was major success as we recorded all time high visitors. We also received many nos. of serious

business enquiries and have added many new customers in our clientele list. The overall success was overwhelming & we continue our networking exercise for which these shows are meant.

Thank you all for your patronage & support.



## EXHIBITION

### Ferromatik Milacron India at Plastics Industry Exhibitions



FMI at Die & Mould India 2012, Mumbai, India



FMI at Plastivision Arabia 2012, Sharjah, UAE



Visitors at FMI's Booth in Die & Mould India 2012

*T*he dialogue at a face to face meeting is the best mode of communication where you can seek to understand one another's views & needs. Exhibition is the venue providing opportunity for "dialogue" with larger audience. Introduction at Exhibition stand every chance to lead to closer associations subsequently. Therefore, Ferromatik Milacron India (FMI) never miss an opportunity to be at an exhibition.



Visitor at FMI's Booth in Plastivision Arabia 2012



Visitors at FMI's Booth in Die & Mould India 2012

Ferromatik Milacron India successfully participated in 8<sup>th</sup> Die & Mould India 2012-International Exhibition held at Bombay Exhibition Centre, Mumbai during 19-22<sup>nd</sup> April 2012 organized by TAGMA India & in Plastivision Arabia 2012-International Plastics Exhibition held at Expo Centre, Sharjah, UAE during 14-17<sup>th</sup> May 2012 organized by AIPMA, Mumbai.



Visitor at FMI's Booth in Plastivision Arabia 2012



## SEMINAR

### Ferromatik Milacron India's Endowment Lecture at Ahmedabad

*F*erromatik Milacron India's Endowment Lecture on 14<sup>th</sup> April 2012 at AMA, Ahmedabad was organized by IPI (Indian Plastic Institute), Ahmedabad Chapter. Endowment lecture was focused upon titles "Create an Efficient Mould Shop" & "Innovation in Plastic Mould Steel" to share the knowledge.

The event was graced by Dr. Subhash Shit, Dy. Director & Head, CIPET, Ahmedabad as a Chief Guest. Mr. Mahendra Patel, Chairman, Gujarat Chamber of Commerce also attended the said lecture as a special guest. Mr. N. K. Balgi being Vice Chairman, IPI Governing Council chaired the session. Mr. Shirish Divgi, COO, Ferromatik Milacron India (FMI) remained present at the programme on behalf of FMI sponsor of the lecture programme. Mr. Atul Kanuga (Chairman, IPI Ahmedabad Chapter), Mr. Rajiv Trivedi (Vice Chairman, IPI Ahmedabad Chapter) and other IPI, Ahmedabad Chapter team members successfully arranged the lecture.

Nikunj Patel (Asst. Manager - Sales Project, FMI) covered details on "Create an Efficient Moulding Shop". He explained about the Layout Characteristics of a Moulding Shop, Elements of Efficiency in Moulding Shop & Advancement in Technology & its Role. Major focus was on three Elements - Highest Uses of Resources, Waste Elimination & Automation. Through Audio - Video presentation, he showed the new technologies Involved in Present Plastic Moulding Shop.



Presence of Plastics Industry Members & CIPET Students



N. K. Balgi (Director, FMI) welcoming Dr. Subhash Shit (Dy. Director & Head, CIPET, Ahmedabad)



Speakers with N.K. Balgi, Shirish Divgi (COO, FMI) & FMI Team

Mr. Sandeep Mahalle (Product Officer, Bohler, India) & Mr. Peter Muhr (Application Engineer, Bohler, Germany) shared information on "Innovation in Plastic Mould Steel". He explained about the Types of Mould & its Parts, Requirement of Plastic Mould Steel, Selection of Mould Steel with its Properties, Comparison of different Mould steel, etc. He explained about today's need of mould manufacturer & its End users with some application based case study.



Speakers with N. K. Balgi & IPI Team



## GUIDE TO SURFACE DEFECTS

### Guide to Surface Defects on Thermoplastic Injection-Moulded Parts

#### Introduction :

This guide is designed following the same method you should apply for process optimisation. The first visual inspection of the moulded part is followed by defect identification and classification, so that suitable remedies can be initiated. For that purpose, however, fundamental procedures for systematic mould proving must be known and clearly defined. Another aid is provided in the form of a list of important key information on the technology of material, machines, moulds and peripheries.

#### Chapter 1 :

##### Defect classification (identification)

This chapter describes the different defects with the help of numerous pictures and explanations. In this way, defects can be identified and classified.

##### 1.1 Sink marks

Sink marks appear, for example, near material accumulations in the form of depressions on the surface of the moulded part, if the thermal contraction (shrinkage) cannot be compensated for



Figure 1.1 Sink marks near ribs



Figure 1.2 Sink marks near a dome



Figure 1.3 - Sink marks on a cylindrical core with poor temperature control

##### 1.2 Streaks

###### Help on classifying streaks:

Streaks, especially charred streaks, moisture streaks and air streaks tend to look very similar. This is a problem for production in particular, since visual identification is difficult, if not impossible. The processor therefore needs as much information as possible on the plastic, its processing and also on environmental influences, in order to identify the streak. This chapter will therefore provide some information on the different types of streak to facilitate their classification. Not all of the characteristics mentioned will necessarily have to appear.

###### 1.2.1 Charred streaks

If excessively high temperatures and/or excessive residence times thermally damage the melt, gaseous decomposition products are produced, which are visible on the surface in the form of brownish or silvery discolorations.



Figure 2.1.1 - Charred streaks due to on excessive residence time in the hot runner / plasticising cylinder

Figure 2.1.2 Charred streaks due to high shearing heat in the gate



Figure 2.1.3 - Charred streaks due to an excessive residence time in the plasticising cylinder

##### Characteristics of streaks

- The streak appears periodically.
- The streak appears behind narrow cross-sections (shear points, e.g. gating system) or behind sharp edges in the mould.
- The melt temperature of the injected melt is near the upper processing limit.
- Lowering the injection speed reduces the defect.
- Lowering the melt temperature reduces the defect
- The melt resides in the plasticising unit or the space in front of the screw for a long period of time, e.g. due to cycle breaks or low shot volumes.
- The reclaim content is high, or a part of the material has already been melted several times before.
- The mould is equipped with a hot-runner.
- The mould is equipped with a shut-off nozzle.
- The moulding compound resides in the dryer for too long.

*to be continued in next issue...*