REPORT ON
ARM INTL SARD AHMEDABAD MEET

Venue : Ahmedabad Management Association (AMA)
Atira Campus, Ahmedabad-380015
Date : Sep 29, 2007
Time : 3.30 p.m (Registration)
Attendance : 23 participants
Sole Sponsor : NA ROTO, Ahmedabad
Report Prepared By : S.B.Zaman, SARD Manager

SARD Chairman Ashish Baheti welcomed participants to what he termed was the continuing series of excellent programmes at SARD's Regional Meets. He noted with great satisfaction the significant changes that are so visible now in the rotomoulding industry of the division. The mindset of the moulding industry now stands changed – people are thinking differently and exploring ways of moulding new items. World class moulds are now a reality and there is little doubt that this is the opportune time for those outside the industry, to diversify into rotomoulding. These developments can be termed achievements of SARD as well. The round of self introductions then followed.

Prof P.Vyas, NID Ahmedabad was the first Speaker to be at at the podium with his presentation on **Design & Transportation**. The theme of his presentation was Institute-Coporate partnership and the importance of the creation of a mindset in which industry imbibes the idea of innovation. The presentation then went on to present a case study to illustrate how well this partnership can actually play out in reality. NID was among the Institutes that participated in a Design Competition that FIAT organised which was open to 8 International Design Schools across the world. The task was to design the Italian Way and to stimulate ideas ,proposals and suggestions for the Fiat, Lancia & Alfa Romeo models of tomorrow. 3 final prize winners were to be awarded 5 months internship in Fiat. Each project had to be presented in the presence of the Jury and had to consist of sketchbook, plates & physical models. The intensity and excitement of the competition proved very inspiring and a great experience for the NID student participants of the competition as it involved visits to the NID campus of the Head of Design of Fiat and the Chief Designer of Alfa Romeo.The quality of design output from NID was so good that 12 students were selected when the provision was for 9 at one stage. Ideation particularly sketching, and model construction through rapid prototyping done by the Institute came in for very special praise and culminated in a NID student, M. Ghosh actually winning the first prize for Alfa Romeo.This case study according to the presenter should sow the seeds for partnership to begin between moulders & Design Institutes in India.

S.Venkatchalam, Sintex presented next on **General Rotomoulding Issues**. Marking Out 'Design'as a key aspect that needed attention against the background of advances that the industry has been making in recent times the presentation advocated that the ugly looking black water tanks dotting the skyline will have to change, if the industry is to 'rock & roll' its way to heightened success. The time has come for the industry to look beyond black when it comes to water tanks. Rotomoulding attention in the region has to shift from the predominantly single track of water tanks to a more multi track situation where applications are already underway in the form of Waste bins, Ice boxes, Planters etc. The advantage of

insert moulding that the process provides should be fully exploited. The industry should do out-of –the-box thinking when it comes to raw material and not be restricted to PE. With oil costs perenially on the rise it is time to look at alternate fuels including biofuels. When it comes to moulds the shift from MS to SS is important to bring the shine to the surface of tanks Being innovative in the cooling of moulds will take better care of flange and bottom thickness. Controlling energy costs being the need of the hour, it is important to ensure optimal motor rating and pulverizer blades. There is need to check energy waste between heating and cooling as well as by using the right design for the burner. It is more important to conform to essential quality specifications and tests. Irrelevant quality specs and unnecessary tests are best avoided. The industry has to breed the culture of using new technologies like PLC controls & Supavent etc. It should also make a good case for itself on the commercial front so that a uniform VAT taxation rate applies to its products all across the country.

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Following the tea break, **R.P.Shukla, MPlast** presented on **Moulds for Rotational Moulding**. Right at the outset the intricacies of using different grades of sheets in fabricated moulds was explained. Using of the right mould for a particular product was equally important. The example of a toymaker running into all kinds of difficulties for not using the right mould was narrated to illustrate the point. An interesting observation made was that the Barbie doll was made from the nickel mould, but not many producers actually use the nickel mould. The importance of the pattern making stage using CAM was also strongly emphasized. This is the stage when changes can still be made so as to ensure that it looked exactly like the product. For optimum mould use there are no two ways other than to take the best care in using the moulds. The presentation dwelt in detail on the process of mould making for the various kinds of moulds in use : Fabricated, CNC machined, Cast aluminium, Electroform nickel, High temp epoxy. Advantages and disadvantages of each of these type of moulds were weighed against each other, with the principal factors being : Cost, Requirement of pattern, Time to manufacture, Surface finish, Design freedom, Multiple mould economics, Ease of modification and maintenance etc. The real eye opener for the attendees was the excellent finish possible with Cast Aluminium Moulds – this was illustrated thru several product picture slides. Very high efficiency in thermal conductivity, thin walls, uniformity of thickness, lack of stress, sophisticated geometrics, new levels of design freedom among the many other attributes of versatility cast the Cast Aluminium Moulds as ideally suited for modern sophisticated applications.

Returning as a Speaker at a SARD Regional Meet after a long gap was **Sailesh Sheth**, **Rotomoulding Consulting Engineer** with a topic which he termed uncommon **Tips on Pulverizing Powder for Rotational Moulding**. The Speaker called the topic uncommon, because of the fact that compounding and pulverising were more basic but less talked about than all other things in rotomoulding which so often were common presentation topics in Seminars & Conferences.Unlike the moulders in Europe and America who purchase their powder,SARD moulders do their own pulverizing.Inspite of the in-house operation Indian moulders make little effort to go into the intricacies and nuances of powder use.To know well the powder used,it is important to test for bulk density.Infact good processing and moulding depends on ensuring good flowability of the powder along with optimal bulk density of powder and mesh size distribution.There are always advantages to be had with high levels of bulk density.It is also important to attain ideal mesh size distribution-it is not possible to change much by changing the gaps on the disc. It is important that the production of fluffy powder i.e.powder with “tails” is bad powder which will lead to moulding defects .It will be

almost impossible to compact fluffy powder and the bulk density will always be low.When it comes to machining there is a common misperception that a higher rpm means higher productivity-this is never so. A common myth that moulders still believe in is that excessive cooling is good-this is not so, and if anything needs to be cooled it is the granules .The presentation drew conclusions by examining various economic parameters.

A presentation on Masterbatches by **Vivek Mehta**, **Plastiblends** was next on the agenda. The presentation began by turning a popular saying on its head and advocating that "black is not necessarily beautiful". It was elaborated that while the definition of masterbatch remained the same for everybody,it was the skills and the art of masterbatch making that made all the difference to provide the desired quality and consistency.It is necessary to understand that the key quality parameters of good masterbatches are: accurate dosing, optimum dispersion and a consistent reproducible product which requires specialized knowledge and the right compounding equipment.The presentation ran through the entire gamut of masterbatches explaining properties and listing out advantages and specific utilities.These were : Speciality masterbatches, Black masterbatches, White masterbatches ,UV masterbatches and Antioxidant masterbatches.It has always to be kept in mind that the use of particular types of masterbatches are specific to applications.The contribution of quality masterbatch to the business applications of PP received special attention and has great relevance at a time when PP is developing well as a resin for rotational moulding.

Swetang Dave,Promens India was up next to do the **summing up presentation** which meant that he had to closely look at some of the main issues brought up by the presenters of the evening, and comment on them from the point of view of possible solutions.He began with the presentation on Design & Transportation which had provided a lot of good inputs that were 'food for thought' for the rotomoulding industry of our region.The perspective to note from the presentation on General Issues of Rotational moulding was its comprehensive nature and the thinking it has triggered on how it can be done and where does the information lie.The 'Moulds Presentation" brought out nuances like the thickness of walls and there is little doubt that a lot of initiative is waiting to be taken in this vital area of product development and production. The presentation on powder,pulverizing and compounding is a wake-up call for moulders of our region for continuing to neglect such a basic aspect of rotomoulding , and that the time has arrived to look at it as specialized activity. The importance of masterbatches with all the application specific properties are very essential to enhance quality of modern day rotomoulding products.

Making the ARMI-SARD presentation, **SARD Manager S.B. Zaman** felt that for an organization which had history (over 3 decades of successful operation) and geography (membership spread across 60+ Countries) firmly on it side ,it was important to participate in its activities and benefit from them. He went on to list out interesting features of the calendar of events for ARMI and SARD in the foreseeable future.

A special round of thanks went out to **NA ROTO** ,the sole sponsor of the Meet and to **Anand Panchal** SARD-OC member from that Company for proving himself to be champion again and again as supporter and sponsor of SARD events.
The Meet ended with dinner.

A.Baheti Welcomes Meet Attendees

R.Iyer Sri Momai Introduces himself

Meet Sponsor NA Roto's A.Panchal

Speaker V.Mehta of Plastiblends