

# **GTU INNOVATION COUNCIL**

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## **UDISHA CLUB**

### **Campus Activity Report of February- 2015**

**(Om Engineering College, Junagadh)**

**Mr. R.J.Padariya**

UDISHA Club Co-ordinator,  
OM Engineering college, Junagadh


**Dr. H.M. Nimbark**

Director/Principal,  
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## Computer Department

SR NO.	ACTIVITY INFORMATION
1.	<p><b>Activity : Industrial visit at Bisag,Gandhinagar</b> <b>Type : Industrial visit</b> <b>Date: 6<sup>th</sup> February 2015</b> <b>Venue: Bisag,Gandhinagar</b></p> <p>Department of Computer Engineering organize an industrial tour of Bisag.At the Entrance we show the department like GUJSAT, COMMUNICATION, REMOTE SENSING and the member of companies .Give us a brief introduction about their company with documentary and representation. At there Mr.Kamlesh give us idea and some information about their company.</p> <p>There are various departments in “BISAG”</p> <ul style="list-style-type: none"><li>• GUJSAT</li><li>• Geo-Informatics for Sustainable Development</li><li>• Satellite Communication</li><li>• Remote Sensing Satellite</li></ul> <p>There we know about the institute working under some project like satellite communication and many departments connected with “BISAG.”</p> <div></div> <p>On the second phase, we have seen the satellite communication department. The SATCOM Facility compromises an uplink earth station, control room, To studio and a network of receiving classrooms. The network is used to air practical training for .NET, JAVA teaching session conducted by Microsoft and TCS respectively.</p> <p>In satellite communication department, they described about live telecast of many fields like education, agriculture, resources etc.</p>

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Our faculty members on the behalf of “OM ENGINEERING COLLEGE” gave a gift to the “Miss .BIJAL CHAWLA “ member of “ BISAG”.



Thus, the wonderful journey of our industrial visit reached to a happy conclusion where in each and every one learned lots of new things.

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### 2. Activity : Workshop on Computer Network

Type : Workshop

Date: 28<sup>th</sup> February 2015

Venue: OM Engineering College, Junagadh.

On 28 th feb 2015, We celebrated a “**NATIONAL SCIENCE DAY**” to mark the discovery of the Raman effect by Indian Physicist sir **chandrashekhara venkata Raman** on 28 th feb,1928.

National science day is being celebrated every year to widely spread a message about the significance of scientific applications in the daily life of the people and also to display all the activities ,efforts and achievements in the field of science for human welfare.

So , on 28 th february , Our computer department Organized the workshop on “**COMPUTER NETWORKING**”.



The Workshop was aimed to ignite the students to take up knowledge of “**NETWORKING**”. Around 40 students participated actively in that workshop.

The workshop started with the inaugural function at 10:00 am. In inaugural Session We have Welcomed technical and corporate trainer **Mr.Vasudev kanani** from **Bascom Bridge** Company. Our faculty members motivated the student to participate in such kind of events or workshops and also shared their views on importance of practical performance or practical knowledge in development of student carrier.

The session was started at 10:30 am by **Mr.Vasudev kanani** with the Introduction of “**NETWORKING**”.

He has explained basic knowledge about Connection of Devices In physical Network. Network is for connecting the devices (computers) to transfer data and also use for communication.

In workshop we get knowledge of basic Networking devices and IP (Internet Protocol).

After that in between session we performed some practicals of network like to give IP address to computer and know about same and different network connection.

After performing practical session Mr. Vasudev kanani give some idea about difference between connecting devices like Hub, Router, Switch etc.

The workshop got a great success and very well appreciated by participants and we were also hoping to arrange such kind of workshops in near future .



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## 3. Activity : Poster Presentation on National Science Day

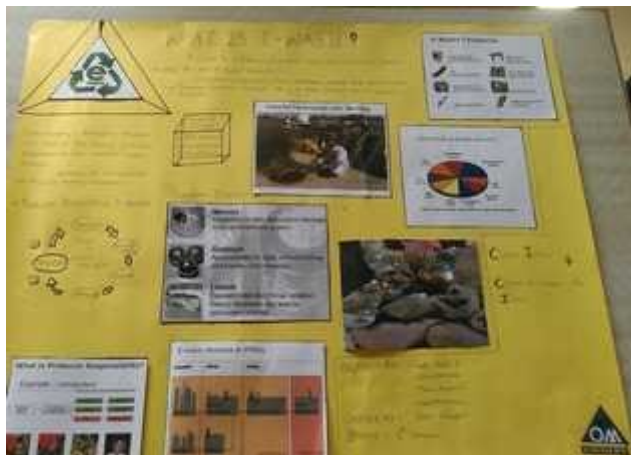
Type : Poster Presentation

Date: 28<sup>th</sup> February 2015

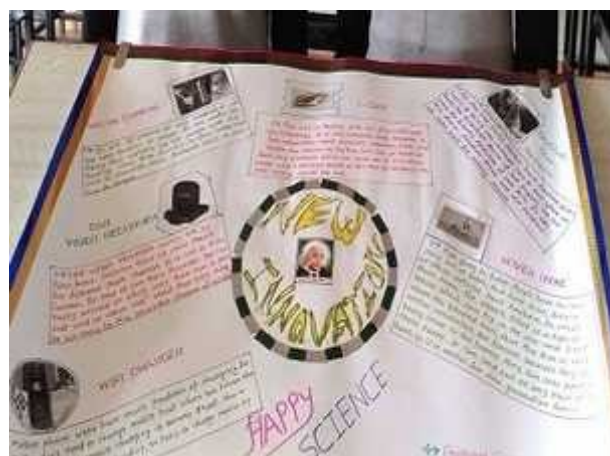
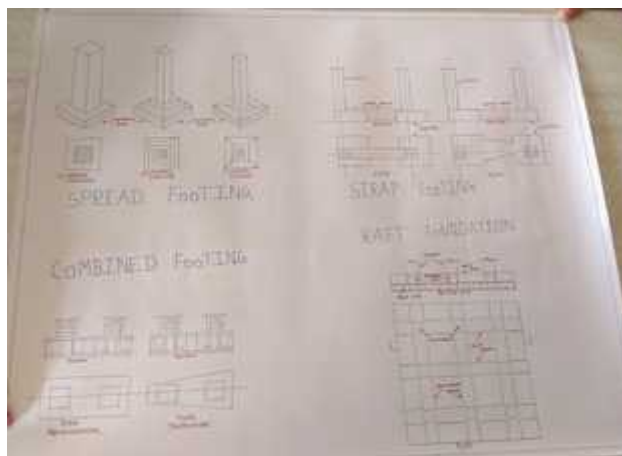
Venue: OM Engineering College, Junagadh.

We were celebrate a national science day on 28 th feb,2015 in the remembrance of C.V.Raman as e discovered a phenomena on scattering of photon.The main aim of celebrating this day to spread the message of importance of science and its application.

At 9:00 A.M we start the exhibition of the poster presentation. Many students were participate in this exhibition and made a poster on science principle,new technology,e-vast etc.



## GLIMPSE OF POSTER PRESENTATION:



The student of civil department also participate in this science exhibition.Many students,faculties, HOD's of different department were came to saw an exhibition and gives the complement to the participant on their project.

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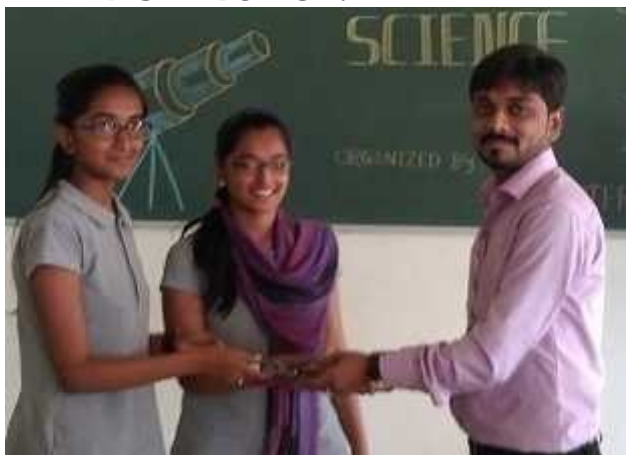
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## GLIMPSE OF MODEL PREPARATION:



There were also working model prepared by the students which is based on science principle like center of mass.

## PRIZE DISTRIBUTION:



Everyone enjoy alot on that exhibition,at last after the evaluation of the different project and model by the faculties. The winner will be declared and the price given to the wieners of this exhibition price is given by the judge of this exhibition.

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## 4. Activity : Quiz Competition on “Battle of the Brains”

Type : Quiz Competition

Date: 28<sup>th</sup> February 2015

Venue: OM Engineering College, Junagadh.

OM Engineering College organize Quiz Competition on 28<sup>th</sup> February 2015 on the topic of “**Battle of Brains**”.

### OBJECTIVES:

- Test students’ accumulation and retention of knowledge in a real life situation.
- Encourage independent study and academic excellence.
- Recognize and appreciate non-traditional venues for competition.
- Build self-esteem and collage pride.
- Empower students with a new understanding of what has been, what is now, and what can be.
- Provide opportunities for faculty, students, parents and the community to work together.





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## Prize Distribution:

In a QUIZ the “Battle of the Brains” competition awards prize to the winning team and the 1 st runner-up and 2 nd runner-up team which is donated by our department faculty. Preparation and friendly competition encourages excellence in everyone. It has been my experience that competing students pay closer attention in class and read more critically. Students discover things about themselves they did not previously know, and collage becomes an active learning process where students enjoy empowerment as well as knowledge.



We enjoyed this quiz competition very much. Also, it was a memorable movements for us. On the behalf of Computer engineering we thanks a lot to our college and our department to give us such opportunity to increased our knowledge and skills.



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## Electrical Department

SR NO.	ACTIVITY INFORMATION
1.	<p><b>Activity : Industrial Visit at 220KV Substation, SHAPUR</b> <b>Type : Industrial Visit</b> <b>Date: 21<sup>st</sup> February 2015</b> <b>Venue : Shapur.</b></p> <p><b>Gujarat Energy Transmission Corporation Limited (GETCO)</b> was set up in May 1999 and is registered under the Companies Act, 1956. The Company was promoted by erstwhile <b>Gujarat Electricity Board (GEB)</b> as its wholly owned subsidiary in the context of liberalization and as a part of efforts towards restructuring of the Power Sector. The company is now a subsidiary of <b>Gujarat Urja Vikas Nigam</b>, the successor company to the <b>GEB</b>.</p> <p>An electrical substation is a subsidiary station of an electricity generation, transmission and distribution system where voltage is transformed from high to low or the reverse using transformers. Electric power may flow through several substations between generating plant and consumer, and may be changed in voltage in several steps.</p> <p>A substation that has a step-up transformer increases the voltage while decreasing the current, while a step-down transformer decreases the voltage while increasing the current for domestic and commercial distribution.</p> <p>Our main purpose for this visit is to be familiar with industriale nvironment and to get practical knowledge of electrical power transmission and distribution.</p> <p>Students of 6 th semester Electrical Engineering will get the idea of electrical power transmission and distribution. Students will also get familiar with Transformer maintenance, circuit breaker, Transformer isolator, bus bar, Protective relays, Lightening arresters, Load break switches.</p> <p><b>Key Points:</b></p> <ol style="list-style-type: none"><li>1. Different Protection Equipment: Circuit breakers, Transformers, Protective relays, Lightening arresters, Load break switches.</li><li>2. SF6-Circuit Breakers: Due to the unique properties of SF6, it is used for 132KV &amp; 220KV lines protection. . Some of the outstanding properties of SF6 making it desirable to using power applications are:<ol style="list-style-type: none"><li>1. High dielectric strength</li><li>2. Unique arc-quenching ability</li><li>3. Excellent thermal stability</li><li>4 .Good thermal conductivity</li></ol></li><li>3. Lightening arresters: Lightening arresters are provided in order to discharge the high voltages. It acts as main protective device for feeder.</li></ol>

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4. Capacitance Voltage Transformer:  
After the Lightening arresters “Capacitance Voltage Transformer – CVT” which together with the Wave trapper acts as LC circuit follows it. In this substation, we used CVT’s in the place of PT’s because it easily passes high frequency signals"www.powergridindia.com.
5. Step down Transformer” is used to step-down the voltage level from 220KV to 132KV by using “.
6. Battery Room:  
There are three panel of battery source one is for PLCC, it is 48v, two panels are 220v, and it is for relay operation and many more application. These batteries are charged when AC supply is ON.



## CONCLUSION:

From this visit, we got the information and practical knowledge about Power Distribution and Transmission. Student got the knowledge about different protection devices used in substation. They got the idea how to read the one line diagram of power substation using different symbols used in diagram. Student cleared out practical knowledge of transformer as how it step down voltage 220 KV to 132 KV. They also got knowledge about new SCADA based system as you can operate substation by manually or by command from computer using SCADA system and PLC programming. About 46 students were benefited from this visit as they got chance to discussion with assistant engineers working at Substation.

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2. **Activity : Seminar on Electrical Safety**  
**Type : Seminar**  
**Date: 31<sup>st</sup> January 2015**  
**Venue : OM Engineering College, Junagadh.**

**Mr. Kashyap Oza (S. S. in 220KV Shapur)** taking this session and share his valuable knowledge with us. Our main purpose for this Seminar is to be familiar with safety equipment as well as to aware is students for the precaution required in field work to avoid the accidents.



Safety means the state or condition or freedom from danger or risk to avoid the accident, Safety can also be termed as freedom of persons from injury and of property from damage. Safety rules and safety instructions shall be applied when working on or near to energize and DE-energize equipments / lines.

Safety is more essential part of the any system, and most of the accidents or damages are occurs due to the lake of the safety knowledge. Proper care should be taken while handling conducting material to avoid the accidents. We must follow standard safety rules and also providing safety tools & primary kit like First Aid Box with medicines and bandages etc. shall be in each and every department.

## **Topic Discussed:**

- **Basic Safety rules:**  
First of all he start with the basic rules related to safety and its important in industrial application as well as home application.
- **Safety tools & its use:**  
After completion of the initial session related to the rules and also they discussed the tools & its use which are used for safety purpose like a) safety shoes b) Helmet c) Hand gloves d) Earthing rods etc.

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## CONCLUSION:

By conducting this Seminar, students have got some brief idea regarding how to make effective report or presentation in Safety. This will be beneficial to students as well as faculties. This workshop will be helpful to student for getting job in industry because industry first requirement is safety. Around 100 students were benefited and the faculty members of electrical department has attended this workshop and got the knowledge about the SAFETY.



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## Mechanical Department

SR NO.	ACTIVITY INFORMATION
1.	<p><b>Activity : Industrial visit at Vishal manufacturer pvt.ltd.</b> <b>Type : Industrial visit</b> <b>Date: 7<sup>th</sup> February 2014</b> <b>Venue :Vishal manufacturer pvt.ltd.Rajkot.</b></p> <p>Vishal Manufacturer Pvt. Ltd. is a company founded in the year 1995 by <b>Mr.Nathabhai Patel</b>, an entrepreneur with a vast experience of <b>30 years</b> in foundry industries right from conventional foundry to investment casting foundry.</p> <p>The company is based at Rajkot, Gujarat and has evolved to become a high end technological foundry from the foundation of Vishal Foundry, a conventional foundry and a reputed production house for precision investment castings (Lost Wax Castings), ferrous and non-ferrous casting, grey iron castings and machined castings at Rajkot. <b>Vishal Manufacturer Pvt. Ltd.</b> is setting up a new production infrastructure with a vision to ensure maximum value addition to our customers by supplying quality casting products on time using high end technology. This approach will have focus on customer's productivity and profitability with accuracy, precision and quality casting.</p> <div></div> <p>Vishal Manufacturer PVT. LTD. is a company of casting related manufacturing process. Students will get benefit regarding their theoretical subject of manufacturing process and they also get the knowledge of automated manufacturing system.</p> <p><b>Casting Process:</b> Casting involves pouring liquid metal into a mold, which contains a hollow cavity of the desired shape, and then allowing it to cool and solidify. The solidified part is also known as a casting, which is ejected or broken out of the mold to complete the process.</p> <p><b>Expendable mold casting:</b> Expendable mold casting is a generic classification that includes sand, plastic, shell, plaster, and investment (lost-wax technique) moldings. This method of mold casting involves the use of temporary, non-reusable molds.</p>

## **Sand Casting:**

Sand casting, also known as sand molded casting, is a metal casting process characterized by using sand as the mold material.

It is relatively cheap and sufficiently refractory even for steel foundry use. A suitable bonding agent (usually clay) is mixed or occurs with the sand. The mixture is moistened with water to develop strength and plasticity of the clay and to make the aggregate suitable for molding. The term "sand casting" can also refer to a casting produced via the sand casting process. Sand castings are produced in specialized factories called foundries.

## **Pattern:**

The pattern is the principal tool during the casting process. It is the replica of the object to be made by the casting process, with some modifications. The main modifications are the addition of pattern allowances, and the provision of core prints. If the casting is to be hollow, additional patterns called cores are used to create these cavities in the finished product. The quality of the casting produced depends upon the material of the pattern, its design, and construction. The costs of the pattern and the related equipment are reflected in the cost of the casting. The use of an expensive pattern is justified when the quantity of castings required is substantial.



## **Cope and drag pattern:**

A cope and drag pattern is similar to a match plate pattern, except that each half of the pattern is attached to a separate plate and the mold halves are made independently. Just as with a match plate pattern, the plates ensure proper alignment of the mold cavities in the cope and drag and the runner system can be included on the plates. Cope and drag patterns are often desirable for larger castings, where a match-plate pattern would be too heavy and cumbersome. They are also used for larger production

quantities and are often used when the process is automated.

## **Core and core box:**

A core is a preformed baked sand or green sand aggregate inserted in a mold to shape the interior part of a casting which cannot be shaped by the pattern. A core box is a wood or metal structure, the cavity of which has the shape of the desired core which is made therein.

## **Metal Pouring:**

Melting and pouring are the processes of preparing molten metal of the proper composition and temperature and pouring this into the mold from transfer ladles.

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### 2. Activity : Industrial visit at Ramdoot Investment Casting Pvt. Ltd.

Type : Industrial visit

Date: 7<sup>th</sup> February 2014

Venue : Ramdoot Investment Casting Pvt. Ltd, Rajkot.

The company is based at Rajkot, Gujarat and has evolved to become a high end technological reputed production house for precision investment castings (Lost Wax Castings), ferrous and non ferrous casting, grey iron castings and machined castings at Rajkot.

The company also aspires to cater to the technically challenging needs of our clients who also aspire for high end casting technological solutions for various business verticals including Industrial, Automotive and other specific industrial needs.



Investment casting, also called lost wax casting, is widely used for producing ferrous and non-Ferrous metal parts. Unlike other casting processes, investment casting produces net shape parts with excellent surface finish and dimensional accuracy. This manufacturing process is ideal for applications that have relatively low production quantities (10 to 10,000 pieces) or rapidly changing product designs.

Since investment casting uses expendable patterns and ceramic shells, it is excellent for complex and detailed part designs. The process manufactures intricate parts that are difficult, if not impossible, to machine, forge or cast. Examples include internal passages and ports in a valve body, curved vanes of an impeller and internal cooling channels in a turbine blade. The critical barrier in prototype development and short-run production is the time and cost for injection molds. Each metal casting requires one wax pattern, and these patterns are injection molded. As design complexity rises, the tooling often becomes too costly and too time consuming to make prototyping and low-volume production practical.

#### **FDM and Investment Casting:**

The key advantage of FDM (fused deposition modeling) is that it eliminates the need for tooling. Building the tools can take four to six weeks. With FDM, the tooling cost is eliminated and the lead time for a cast part is slashed to just 10 days on average. This yields a savings of \$30,000 and two to four weeks for a typical project, which makes investment casting viable for prototype quantities.

## Process Overview:

The investment casting process begins with a pattern. Traditionally, the pattern was injection molded in foundry wax. Gates and vents are attached to the pattern, which is then attached to the sprue. After all patterns are mounted to the sprue producing what is called a casting tree. At this point the casting tree is ready for shelling. The casting tree is repeatedly dipped in ceramic slurry to create a hard shell that is called the investment. The patterns are then melted out (also called burnout) of the investment, leaving a cavity in the shape of the part to be cast. A metal alloy is melted, often in an induction furnace, and poured into the preheated investment. After cooling, the shell is broken away, the metal parts are cut from the tree and the gates and vents are ground off.

## Pattern Design:

Beyond good design practices, the key consideration is pattern modification to prevent shell cracking and minimize residual ash. Ceramic shells have a very low coefficient of thermal expansion, so any expansion of the pattern during the burnout cycle may cause the shell to crack. Additionally, Fortus material does not melt like wax, so it is burned out leaving a small amount of ash (0.021 percent) in the shell cavity. This ash is later removed in a shell washing process. The pattern part interior style is modified to reduce the amount of material reducing expansion forces. This is achieved by building the pattern using the sparse fill build style in Insight, FDM's part processing software. Adding foundry-defined gating and vents to the CAD model and constructing it as an integral part of the pattern. To facilitate shell washing, gates are added to opposite ends of the pattern. This gate configuration provides a flow path for water to flush out the residual ash from within the shell. Alternatively, the foundry can add wax gates and vents to the pattern. Vents are added to the pattern to assist in the burnout process. The final step is to add machine stock and shrinkage compensation to the model. For machined surfaces, 0.020 to 0.030 inch (0.51 to 0.76 mm) machine stock is added to the CAD model.

## Pattern Construction:

FDM investment casting patterns require no modification to the build parameters and build styles. One consideration is to orient the model to achieve the best surface finish and feature detail. Another consideration is to build the pattern using the finest layer resolution available. This will produce the thinnest walls promoting complete burnout without cracking the shell. Presently, the only materials that have been validated for the investment casting process are ABS, ABS plus, ABS-M30 and ABS-M30i.





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## **Casting:**

The completed shell is now ready to receive the molten alloy. The shell is preheated, and the alloy is cast into it according to the foundry's operational procedures. After cooling, the shell is broken away, and the castings are cut from the sprue. The gates and vents are then ground off. The casting is now ready for use or for secondary processes, such as heat treatment.

## **Conclusion:**

With FDM patterns, investment casting is practical for prototype and low-volume production applications. In less than two weeks, prototype castings in numerous alloys are ready for testing, evaluation or use. Making investment casting patterns out of Fortus ABS materials saves both time and money on low volume production applications as well as investment cast prototypes. With only minor modification to the pattern design and the burnout process, FDM technology eliminates the costly and time-consuming tool-making step needed for lost wax casting. With this process guide and the skills of a qualified foundry, companies in all industries can capitalize on the efficiency, capability and quality of investment casting.

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### 3. Activity : Industrial visit at Sumangal Castings Pvt. Ltd.

Type : Industrial visit

Date: 7<sup>th</sup> February 2014

Venue : Sumangal Castings Pvt. Ltd. - Shapar (Veraval).

Department of Mechanical engineering from OM Engineering College arranged One Day Industrial Visit to Sumangal Casting & Forging - Shapar(Veraval) dated 07<sup>th</sup> February 2015 to improve technical skill and providing practical exposure to students of Mechanical Engineering department. Faculty and some of our students co-ordinator discussed the visit with the company representative **Santoshkumar Mourya** who was working in a company as **Quality assurance engineer**.

We started our visit die shop of the factory where the pattern of die was being prepared. In that section the worker were They were provided by the mould on which the required pattern of desired shape and dimension was designed. Then the wax was injected in the die on which the design was printed, with the high pressure of 35 bar of temperature 60<sup>o</sup>-65<sup>o</sup> C.

After preparation of the die according to the pattern, the pieces are then given to the quality and repairing compartment. After passing the quality checking and all repairing, the wax product would pass on to the assembling of product developed by wax injection. All the required parts are joined together.



Due to the high temperature the wax in solid form start to melt and is rejected out from the furnace. After coming out from furnace the pattern has now the cavity inside of shape required in which molten metal can be poured.

#### **Forging Process:**

On the few footsteps we were in the forging department. We started from the store where the raw-material was kept. According to the company's requirement, company gives model drawing. Then the computer calculations are done and accordingly material is cutted.

Then we proceeded toward the die shop. Where all dies are manufactured. Here the pre shape and final shape of product is given. In this compartment various m/c were kept like milling, shaping etc. After getting idea about die preparation we went to forge shop. Here the material is first of all

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heated in furnace according to their respective temp. Then the heated piece is suspended to belt and drop hammer machine. This m/c hammers the product with high pressure due to which it turns into the shape of die. The m/c were of different hammer size of 1 ton, 1.5 ton, 2 ton. Now the hot red metal is heat treated under the temp in Gas Carbonizing furnace. Before heat treated the part goes to trimming press m/c, here the extra material and rib is removed. Now they are kept in contact to open air so that they are cooled down.

The product is now machined on CNC m/c and VMC m/c. Which worked on X, Z axis and X,Y,Z axis respectively. This were operated by Fanuc Control. This machined product then goes to Q.C. (Quality Control) department where the product is checked under height master where OD (Outer Diameter), ID (Inner Diameter) and height is measured and under profile projector where radius is measured. Finally this product is send to company.

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### 4. Activity: Seminar on Application of Non-contact Measurement In Space Engineering by ISHRO

Type : Seminar

Date: 25<sup>th</sup> February 2014

Venue : OM Engineering College, Junagadh.

We are thankful to **Mr. Amit Agarwal** who has scheduled the program in collaboration with **ISRO Scientists**. We are also thanking to the **vice president SSME Shri A V Pathak** who have remained present as chief guest of SSME.

It's indeed pleasure to thank **Shri. K V Govinda** who have agreed the proposal for seminar as key speaker and visited Om Engineering College by cancelling all their appointments and meetings for the betterment of engineering students career.

We are also thankful to **Shri. N M Zaha** who have cut ribbin and make the **Space Exhibition** open for all seeking engineering students and set up the **India's first Space Exhibition** at Om Engineering College by mobile Van of ISRO Ahmadabad.

We thanked to key speakers of Seminar , Scientists who have not only rendered their expertise but acknowledged and motivated to dream with their innovative ideas.

We are also thankful to the all trustees who have encouraged us for organizing the seminar. We are also thankful to **Director/Principal Om Engineering College Dr. H M Nimbark sir** for being a source of inspiration during the seminar.

**Dias Members:**



**Dias Members:**

- **Shri. Anand Zha Scientist DD SAC/ISRO Ahmedabad**
- **Shri. K V Govinda DD Scientist ISRO Bangalore**
- **Shri. A C Mathur DD SAC/ISRO Ahmedabad**
- **Dr. H M Nimbark Director, Om Engineering College**
- **Shri Jayant Jamuar President ASM International**
- **Shri Manishbhai Boghara, Trustee, Om Engineering College**

An article book has been revealed by Shri. K V Govinda DD Scientist ISRO Bangalore Article book



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contains various types of qualitative articles based on the non contact measurement techniques applications used in space. It began with the history of Non Contact Measurement to the innovative techniques of non contact measurements in space.

The article book is the fifth published volume which stands for the excellent work on specific field where academicians as well as scientist have also rendered their ideas to article book. They have added utilization of Non Contact Measurement Methodology along with the latest inventions in Space Application. The article book is inculcated with through ideas which are researched at till date by Scientists themselves.

There are many multinational companies have participated in Seminar. HE has also stated their view points to the scientists of **ISRO, Ahmadabad as well as Bangalore**. One milestone is being set up through collaborating Industrial modals presentation in front of Scientists as well as academicians. There are more than **30 industrial representative** have participated from **Multinational and nation companies across from Gujarat State**.

Inaugurating Speech by **Shri. Anand Zha Scientist Dy. Director SAC/ISRO Ahmadabad** Shri Anand Zha sir has inaugurated the session with his speech to acknowledge the attendees with the history of ISRO. HE has elaborated the various activities and missions which already achieved and on which missions are going to be completed in upcoming days.

He has also shared the main objectives and goal of ISRO to stand on the quality work enhancement to make the India incredible. HE shared the information to set the antenna for live telecast and added the compact size with radiography system of antenna for operating signal from earth.



**Shri. A V Pathak Vice President of SSME** has given brief speech about SSME. SSME is founded with old technology in last five to six decades. They were having ideas old systems for measuring fir capturing signal by angle, alignment, material etc with adjusted their intensity of signal.

He shared that SSME is organizing new seminar, workshops on latest research conferences and invites innovative research by eminent engineers. It will upgrades the present knowledge by allowing engineering students to participate with scientists and try to present the ideal and useful ideas to Scientists even. SSME invites all engineers students, institutions, industry research as member and utilize it in Space application through presenting it in front of ISRO scientists.

**Shri. K V Govinda Dy. Director, Scientist ISRO Bangalore** has delivered a speech on

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Introductions to non-contact methods.

He shared the utilization of Non Contact Measurement in various disciplines like, Space, Mechanical Industries, Medical, Agricultural and Engineering Societies and association. In Medical discipline, through laser technology, doctor can cut or do any operation of any body parts and one can plant new plant by the Non Contact Measurement.

As in Industries, like casting or forging companies to work with high temperature can be measured easily through the Non Contact Measurement techniques. In Space, we can find the gap between two satellites, earth to satellites, sensor system can be added and measured the gravitational force of earth can be measures easily.



**A V Apte Sir SAC/ISRO Ahmedabad** He shared his view point on antenna usages for supplying messages and result from earth surfaces. Its alignment can be utilized for increasing frequency which is known as encoding system.

**Kinariwala sir, Scientist SAC/ISRO Ahmedabad** He has shared the signal modulation for the idealist techniques of Signal processing. He also shared frequency can be modulate with use of modulator and signal can be processed to make the strangest signal which will remove all the variables or obstacles created by various layers of atmospheric conditions.



**Rajesh Patel, Scientist SAC/ISRO Ahmedabad** He said about the signal results acceptance and demodulates and displays the connected platforms as results. The signal result is as important for prefect communication and creates a constant link between earth and space satellite.

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**Dr. Vaishnav, Scientist SAC/ISRO Ahmedabad** he talked about the length of signal used for communication between satellite and earth. If signal is very long then the modulation process can take long time and the signal will be delayed which can also break the communication and create huge trouble which is the most undesirable technical defects in Space.

**Anurag Verma, SAC/ISRO Ahmedabad** he was awarded as a youngest scientist of India, He has shared his latest invention like he shared view point of Earth surface. He has also shared few defects of Satellite which can be solved through combining satellite signal from earth.

**Amit Agarwal, SAC/ISRO Ahmedabad** as coordinator of the program. He shared the values of Non-Contact Measurement. He shared his research based on the opaque glaciers benefits in place of transparent glacier. Because when the rays should be passed it should reflect which the measuring system is. It has a limitation that it will not work on transparent system.

### Glimpse of Space Exhibition:



**API** and **HEXAGON** who are suppliers of **ISRO** has presented their space models to students. Trough Mobile Van, ISRO has started to Exhibition of Various Space Satellites Students of Om Engineering have explained al the models of Space bought by Mobile Truck of ISRO Ahmadabad. Engineering as well as science Students of various colleges & schools have visited the Space Exhibition and gave their feedbacks. This was the first attempt of Using Mobile Van of ISRO all over in India for Space Exhibition.

