



Q-ZINE

Bimonthly Newsletter

National Institution for Quality & Reliability

Chennai Branch

NOV - DEC 2017

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National President Speaks...



Dear Quality Professionals,

We are into the Christmas season and also looking forward to welcome the New Year in a few days. My best wishes to you and your family for a more Happy and Prosperous New Year!

Year 2017 has been full of activities with an active participation from all our branches across the country. While our already matured Chennai Branch had organized a series of evening lectures, ZED awareness programs, Cluster programs etc., our Delhi NCR & Pune Branches joined hands in promoting the NIQR flagship program "Quality for Industry 4.0 - QFI 4.0" to drive digital movement across the industry. We will soon enter into an MOU to partner with the Centre For Learning in Industry 4.0 "C4i4.0" Pune, which has already started activities so as to establish a World Class Centre for promoting innovation &

adoption of Industry 4.0 solutions for supporting SMEs & MSMEs and making them globally competitive. We are also preparing to soon conduct a few programs in collaboration with ASQ.

Friends! Our National Convention will be held at Chennai in the month of August 2018. I would request all of you across the country, to come forward and join hands to make this event more effective in spreading the NIQR message to the nation on "adoption of the digital quality practices so as to enhance speed and accuracy of implementing the Quality Principles".

Let us work together to make our institution stronger not only across the country but also spread its wings globally.

Warm regards and best wishes!
P.K. Aggarwal

From Chairman...



My advance greetings for the New Year. Let 2018 bring you all the best in your life.

In 2018, NIQR also will re-invent itself; all its processes will be digitalized. The work and trial has already been started. Seeing the trials what we are doing in this arena gives me immense pleasure for we are able to migrate to the Digital world. Thanks to the efforts put by Mr. C. V. Gowri Sankar and team to make this a reality. Mr. Gowri Sankar, with his limited knowledge on digitalization is able to achieve this feat only because of his Passion and his knowledge about what an end user wants...Kudos to his passion...

We are putting all our efforts to transform NIQR into a Business Visionary; NIQR should be able to predict future and alert the Indian Industry. We are able to do justice for this transformation by disseminating our knowledge in Industry 4.0 and Electric Mobility.

We are very successful in spreading this message about future. We have so far touched about 8800+ hearts with this message; NIQR is successful in transforming the minds of the budding engineers who have to re-think about the skills they should develop for the future. We are organizing an International Conference on Electric Mobility with SRM University in coming Feb 18.

I hope, you will all understand, that we are putting all our efforts to make NIQR to stand out as an organization which is a Visionary, Knows what to do and more efficient in travelling towards its objective....

None of the above will happen without all your support. Thanks in advance for your fullest cooperation...

Let us transform ourselves and NIQR...

Once again wishing you for a greatest new year 2018.

K. Manikandan



From Secretary...

On behalf of NIQR Chennai Branch, I would like to express my sincere greetings to all of you for the New Year, and also show my high appreciation for your strong support and positive contribution to all activities of NIQR throughout 2017.

2017 has been a milestone year for us; we have sustained the standards set last year in terms of Newsletters and exceeded in terms of Lecture Meetings.

On the education front, we have started our branch's 11th Student Chapter and jointly conducted a National Conference in SRM University, Vadapalani.

The highlight of the year is organising Awareness program on Industry 4.0 in Industries and Institutions and we have sensitised 8574 minds in 32 programs in this year alone.

The year 2018 is going to be another important year for us as we are moving to a digital platform and also hosting our 16th National Convention.

All of you would have visited our revamped website with many New User Experience and Interface; we welcome the 5 new members who have registered on line; and we made history by digitally registering the participants for CYK Memorial lecture.

All these were possible with support and wishes from all of you and we look forward to your continued support in the future.

HAPPY AND PROSPEROUS NEW YEAR 2018.



NIQR welcomes the new members who joined during Nov - Dec 2017



Individual Life Members

Mr. D. Sekar, ACMA-UNIDO Counselor

Mr. N. Mani Sankar, TQM Consultant

Mr. J. Jegan, Process Excellence Mentor, Indus Towers Ltd.

Dr. S. Rajkumar Vice President-Operations, Rane Engine Valve Ltd.

Individual Annual Members

6 Members

Institutional Member

Central Institute of Plastics Engineering & Technology, Guindy

Chennai Branch Activities

Shri LSN Guptha Memorial Lecture

NIQR Chennai Branch organised the Shri LSN Guptha Memorial Lecture Meeting on 24th October 2017, at Hotel Radha Regent Chennai. Mr. A. Kamal Basha, Head - Foundry Division, Ashok Leyland Ltd., was the Chief Guest. Mr. K. Manikandan, Head - Sourcing Development, Ashok Leyland Ltd., was the Guest Speaker. This year's meeting had record gathering of 118 Members and Guests.

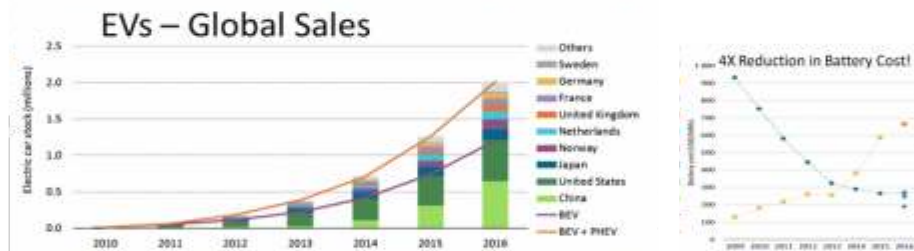
Mr. P. K. Aggarwal, National Persistent NIQR welcomed the gathering which included Mr. Sudershan Guptha, son of LSN Gupthaji and family members; he spoke about NIQR's Industry 4.0 mission and made a special mention about the role of Mr. C. V. Gowri Sankar towards achieving that.

Mr. G. Rangarajan, Past Chairman, NIQR Chennai Branch shared with the audience the achievements of Late Shri L Satyanarayana Guptha in the fields of training and development and shared some of his pleasant memoirs with Gupthaji which included how he was encouraged by Gupthaji in opening NIQR Hosur Branch with 350 members.



Mr. Manikandan started his lecture on "Electric Mobility" with a video about the features of the latest E-car from Porsche. Emphasising to the audience that the session is not about technical details of E-car but the effects of electric mobility in various fields and the preparedness required, he stressed that like Industry 4.0 mission of NIQR, he will focus on sensitising people on electric mobility.

He dwelt on the evolution, the future and the impact of the EV Technology and disseminated the technical details to social, political, financial and aesthetical knowledge to the audience who were awestruck by the magnitude of each detail.



He explained the trend so far and forecast for the future in various aspects of electric mobility. The audience was moved a bit by the massive reduction in number of moving parts to 20 in E-car compared to 1000s in diesel vehicle. His explanation of the disruptive technological impact of various parameters like moving parts, battery life/cost, fossil fuel, lub oil, energy used, effect on emission did impact the audience which was reflected in the long Q&A session with some participants throwing up some complicated issues which the speaker answered brilliantly. At the end, Mr. PK Aggarwal, National President, NIQR posed an interesting question: what is the role of NIQR in the 'Electric Mobility' front? - we should start a sensitising mission like Industry 4.0.

Mr. A. Kamal Basha, the Chief Guest made us learn a bit more about Guptaji with some wonderful narrations, a story on creativity and his BEACHBOY episode. It was nice of him to express crisply his memoirs during his training period.

The Sept-Oct Newsletter of NIQR Chennai Branch was released on the occasion by the Chief Guest.

Mr. C V Gowri Sankar, Secretary NIQR Chennai Branch proposed a vote of thanks.



Mr. K. Manikandan is a BE Mechanical from NIT, Trichy and MBA from BITS, Pilani. A Quality Professional with 24 Years of Experience in Commercial Vehicle Industry and in Various aspects of Quality Management. He is a Black Belt in Lean Six Sigma and Initiated the Lean Six Sigma Movement in Ashok Leyland. He played an important role Challenging the prestigious Deming Award for Ashok Leyland Pantnagar Plant. Currently, he is Head - Sourcing Development in Ashok Leyland and Chairman, NIQR Chennai Branch

Monthly Evening Lecture Programs

November 2017

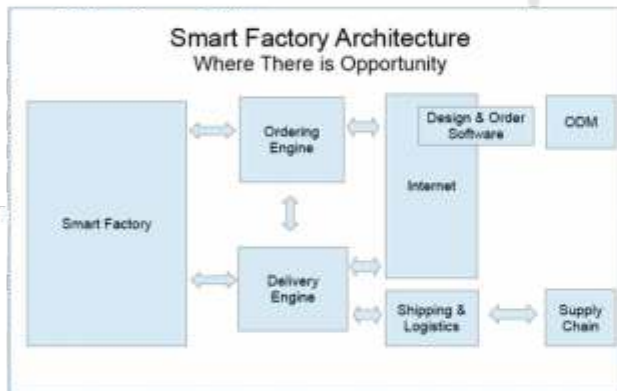
On 11th November 2017, Mr. Gopi Kumar Bulusu, Founder CEO and Chief Technologist at Sankhya Technologies delivered a lecture on "SCCI Smart Factory Reference Architecture" at NIQR Conference Hall.

It was a memorable day for all NIQRians.

Captain (Dr) Singaraja, Senior NIQRian (80+ YEARS YOUNG) and former ECM of NIQR has been awarded "Dr. Suganchand Bhatia Memorial Award" for writing a Book on 'Issues of Senior Citizens' by All India Senior Citizens Association. As he has received the award by post only on that day, Dr. V. Swaminathan, National Vice President, NIQR re-presented him with the award and all participants wished him many more healthy years to receive more such awards.

Mr. C. V. Gowri Sankar welcomed the gathering and introduced the speaker.

The speaker started with some key initiatives of Super Computing Consortium of India, a Platform for Technology Collaboration in Smart Factory Architecture. Coming to the Reference Architecture, Mr. Gopi was emphatic that to succeed, Make in India has to create global economic space for India-made systems which is a long way to go. He then explained the purpose of Reference Architecture and gave a Broad overview of Smart Factory Sub-Systems and Components. He concluded with a picture of inside Smart Factory and Smart Machine.



Mr. K. Manikandan Chairman NIQR summed up the proceedings and elaborated on how NIQR is moving from QAP topics to Industry 4.0 related topics which are the requirements of the future. In this scenario, he also indicated more collaboration with Mr. Gopi going forward.

Dr. Singaraja honoured the speaker with a shawl, Dr. V. Swaminathan honoured the speaker with a memento and Mr. D. Sekar of Pondicherry honoured the speaker with a laminated memento. Mr. Gowri Sankar informed the audience about the steps being taken by Mr. Sekar in reviving the NIQR Pondicherry Branch. Mr. Sekar introduced himself and promised his contribution towards the same.

Mr. Gowri Sankar proposed a vote of thanks.



Mr. Gopi K Bulusu is the CEO and Chief Technologist at Sankhya Technologies Private Limited; an R&D firm he co-founded in the year 1996 in Chennai.

- He has over 25 years of R&D experience spanning a wide range of technology platforms
- He has a Master in Computer Science from Arizona State and Bachelors In Computer Science and Engineering from College of Engineering, Guindy
- He is founder chair of IEEE Vehicular Technology Society, India Council Chapter
- He is Chair at Super Computing Consortium of India
- He has won several accolades and awards over the past 2 decades
- Lockheed Martin India Innovation Award (2008)
- DST Lockheed Martin Award (2009) and
- NASSCOM Award for India's Most Innovative Companies (2004)

Monthly Evening Lecture Programs November 2017

On 25th November 2017, Dr. E. Bhaskaran, Deputy Director of Industries and Commerce, Government of Tamil Nadu delivered a lecture on "Industry 4.0 for MSMEs" at NIQR Conference Hall.

Mr. C. V. Gowri Sankar welcomed the gathering and introduced the speaker and thanked Prof Kiran for introducing a Government Official to give a lecture for NIQR members. Dr. Bhaskaran started with the encouragement by TN Govt. for becoming Techno entrepreneur in 100 days and detailed the 10 steps involved in it.

He explained how the Ministry of MSME is implementing a "Digital MSME" Scheme for promotion of Information & Communication Technology (ICT) in MSME Sector and motivates MSMEs to adopt ICT tools and applications in their business processes. He dwelt on the subsidy provided for MSMEs for using cloud computing and how MSMEs can improve their global competitiveness by use of "ICT for Smart".

For lack of time, he rushed up on the scheme 'Digital MSME' its objectives and components of the Scheme and the 'National Manufacturing Competitiveness Programme'. The audience was awestruck by the list of beneficial schemes and subsidies he revealed.

Mr. K. Manikandan Chairman NIQR summed up the proceedings and commended about the passion of Dr. Bhaskaran for making such a wonderful presentation and the amount of information he has given in a short span of time. Even though everybody agreed to do away with the Q&A session, it turned out to be one of the longest and meaningful ones in the last few months making the total program lasting exactly 120 minutes.

Prof Kiran, National Council member NIQR honoured the speaker with a shawl, Mr. V Kumar Sr. Manager-TPM, Brakes India Ltd. honoured the speaker with a memento and Ms. K Geetha, Supplier Quality, Ashok Leyland Ltd. honoured the speaker with a laminated memento. Mr. Gowri Sankar thanked the participants.



Dr. Ethirajan Bhaskaran, B.E., M.I.E., M.B.A., Ph.D., C.E., (D.Litt) (D.Sc) has 26 years of experience and is currently Deputy Director of Industries and Commerce (Technical) (Entrepreneurship Development Programme) Department of Industries & Commerce, MSME Dept. Government of Tamil Nadu. Right from College days, he has been getting awards and in his illustrious career he has got One Patent and One Design Registration. He has so far 132 publications useful for MSMEs and 22 Books and 64 Research Paper presentations.

PROF CYK Memorial Lecture

NIQR Chennai Branch organised the Prof. C. Y. Krishna Murthi Memorial Lecture Meeting on 16th December 2017 at Hotel Radha Regent Chennai. Mr. Muthu Kumar Thanu, President & Group Chief of HR, TAFE was the Guest Speaker.

Mr. C. V. Gowri Sankar, Secretary, NIQR Chennai Branch welcomed the gathering. Dr. A. Sanjeeva Rao, former National President, NIQR started the proceedings with details of Prof CYK's involvement as one of the founder members of NIQR & QCPI and recalled his nostalgic memories with Prof CYK and also read out the message from Prof CYK's daughters thanking NIQR for organising the event. Mr. P. K. Aggarwal in his Presidential address set the context of the lecture with a short and sweet address touching the Maruti culture of developing people. Mr. S. Rajasekaran, National Vice President, NIQR introduced the speaker of the day, Mr. Muthu Kumar Thanu.

Mr. Thanu entertained the audience for the next 100 minutes with a lecture on "Engaging the Minds of Employees". He started the session explaining the concept, 'engagement of mind' with some beautiful examples. Through a video of the Flying Sikh Milkha Singh's 400 metres dash in Pakistan where his mind prevailed over his serious leg injury to come out winner, he drove home the importance of engaging mind.

He made an impact with his 'Seven Principles of High Performance Culture', namely,

1. Clarity of purpose,
2. Performance through teaming,
3. Use your values,
4. Leadership everywhere,
5. Communication
6. Agility,
7. Don't tolerate poor performance

His 100 iddhis example in explaining Deming's quote 'It is not enough to do your best; you must know what to do, and then do your best' went well with the audience.

He concluded the session equating the role of a Quality Professional to that of a Missionary/Priest

The Q&A session was very lively and lengthy with queries ranging from the difference of process and mind to social disruptions like Smartphone.

Dr. P. Ramesh, Vice Chairman, NIQR Chennai Branch delivered a vote of thanks.

Message from CYK's Daughters

We are forever grateful to NIQR, C. Sanjeeva Rao uncle and other respected members of NIQR, to have continued the legacy of CYK and even more grateful for keeping up the flame of his research glowing. It is indeed very unfortunate for us to not be able to attend the greatest moment of our lives, to see our dad honored. Thank you NIQR once again. But we believe in a way we are just following him by fulfilling our responsibilities.

He was a great teacher and could always capture the audience with a humorous joke here and there. We are happy all the more this year, that today's topic "Engaging the minds of the employees" is what he was versatile about. To emphasis this, he used to lecture the factory workers of TVS, and other large companies for which he consulted, in Tamil, even though his Tamil was highly accented and passable. He used to tell us only if you can make the employees understand, the management will. So I really thank Mr. Muthu Kumar Thanu (president and group chief of TAFE), for educating us on this regard. Thank you sir.

We once again Thank NIQR for realizing his greatness and honoring him every year in an unforgettable event like this. Thank you ...

DAUGHTERS OF C.Y. KRISHNA MURTHI AND C.K. VALLI



M K Thanu is a post-graduate from MSSW batch with a career graph moving from public sector BHEL, Whirlpool, Bharti, Murugappa Group and presently as Group Chief HR Officer for the merged entity of TAFE & Eicher. He has varied HR & TQ experience in Engineering, FMCG, and Telecom & presently in Farm/Auto industry. He is a certified assessor in Malcolm Baldrige Award, CII Business Excellence Model and both Hays and Mercer models of Job Evaluation. He has attended the Advanced Human Resource Executive Program from Ross School of Business, Michigan. He has received recognition for best HR practices in Air-Tel and in Tube Investments of India and has been part of "Best Employer India Award" from Aon-Hewitt. He had held the positions of Southern Regional Chairman for HR with CII & Vice President of HRD Network and presently with CII Tamilnadu as HR Panel Chairman. His pastimes include travelling, heritage site visits and related history.

Q-ZINE

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DAUGHTERS OF C.Y. KRISHNA MURTI AND C.K. VALLI



Two day Training Program on Quality Awareness on 24th & 25th November 2017

NIQR Chennai Branch organised a two day training program on Quality Awareness for shop floor operatives on 24th & 25th November 2017 at NIQR Conference Hall. There were 33 participants from 11 organisations.

Mr. R. Gopinath of NIQR Office was the coordinator.

The faculty comprised of Dr. V. Swaminathan, National Vice President NIQR, Mr. S. Murugan, ECM NIQR Chennai Branch & Mr. P. Kothandaraman, ECM NIQR Chennai Branch. There was full attendance on the both the days.

The participants were very enthusiastic and eager to involve & learn the nuances of the 5S, TPM and Total Quality Management, and evoked keen interest in problem solving techniques and appreciated the QC case study presentation from M/s Lear Automotives Ltd.

Dr. V. Swaminathan presided over the valedictory function and presented the certificates to the participants. The feedback from the participants was very encouraging.



INDUSTRY - 4.0 Awareness Program: No. 33

The 33rd Program in the series was conducted at Dr. M. G. R. Educational & Research Institute University, School of Engineering, Chennai on 20th October 2017. There were 320 students of different departments of the college.

Dr. Ganesan, HOD of Mechanical Department welcomed the gathering and wanted the students to make use of the lecture to know about the future in manufacturing sector. Dr. Rajan, AP, Mechanical introduced the speaker Mr. C. V. Gowri Sankar and thanked NIQR for its mission of taking the Industry 4.0 to the student community.

The faculty started the session explaining NIQR and its activities and its mission of sensitising 20000 minds this year about Industry 4.0. The program was from 1.15PM to 4.00PM. He explained the industrial and economical Scenario of India and the 4th Industrial revolution. Some of the students and staff members appreciated the contents of the awareness program. They expressed their happiness in learning an important topic which is very vital for India. Elaborating on the need of the day, he advised the students to be in the forefront to take up the challenges in embracing Industry 4.0 instead of being mere followers of technological changes as in the past.



Digital Quality

INDUSTRY - 4.0 Awareness Program: No. 34

The 34th Program in the series was conducted at TI Group of Companies, Chennai on 20th November 2017. There were 60 Engineers from all verticals of the group from different functions. The program was between 2.00PM and 5.30PM.

Mr. V. Kumarasubramaniam, Sr. General Manager, L & D introduced the speaker Mr. C. V. Gowri Sankar to the audience and wanted the participants to learn a new subject by being interactive.

The session was full of interactions and the audience showed their admiration of various videos shown to instill in their minds how new technologies are influencing our way of living.

The session was made very lively with lot of discussion by the participants about their need to skill in different fields to be in the forefront in the future.

Mr. Nakkeeran, Associate Vice President, L & D summed up the program and appreciated the intent with which the videos were used and explained; He was sure the speaker had driven a hole in the minds of the participants and soon it will reflect in their learning new skills.



NIQR Student Chapter, SRM University, Vadapalani Lecture on "How to patent your invention?"

The NIQR Student Chapter of SRM University, Vadapalani organised a guest lecture on "How to patent your invention?" by Mr. S. Prabhunarain, Director - IPR Division, Gagnant Financial & Legal Consultants LLP on 14th November 2017 from 2.00PM to 4.00PM.

Dr. Karthikeyan, HoD - Mechanical Engineering welcomed the gathering and Mr. N. Dinakar, Assistant Professor introduced the speaker.

The Guest of Honour M. C. V. Gowri Sankar addressed the gathering and explained about activities of NIQR especially in arranging guest lectures useful to the members.

The speaker started from fundamentals of legal ownership of an intangible property. It was very interesting to know about the first IPR in India - "An Efficient Punkah-Pulling Machine" by George Alfred DePenning, of Calcutta, in 1856.

Explaining the procedure for obtaining IPR, he impressed on the importance of the Priority Date with the famous invention of Telephone - both Elisha Grey and Alexander Graham Bell independently designed devices that could transmit speech electrically at the same time but Bell patented first.

He further explained the types of patents and the inventions which are not patentable. He also gave details about Trademark Registration and all Trademark Representations like symbols, words, phrases, sound etc. He gave a timeline in detail with a process flow 'How to patent your invention'.

The lecture was attended by 120 NIQR student members and the Faculty members.

Mr. N. Dinakar, Asst. Professor proposed the vote of thanks



Head Quarters Activities

Rejuvenating NIQR Pondicherry Branch

Under direction and guidance from Mr. P. K. Aggarwal, National President NIQR, a process has been set in motion to rejuvenate NIQR Branches which are not very active recently. Dr. V. Swaminathan, National Vice President and Mr. C. V. Gowri Sankar Secretary, Chennai Branch were given the task of making the Pondicherry Branch active again.

After identifying 21 professionals from various Industries and Institutions for revamping the Executive Committee, a meeting was organised on 29th November 2017 at Hotel Surguru, Pondicherry. The meeting was attended by 12 professionals. Mr. V. Venkatakrishnan, Plant Head, Lucas TVS, Pondy was unanimously selected as Chairman and he has agreed to form the committee shortly and come with a timeline for the formal relaunch of the branch.

Let us wish Mr. V. Venkatakrishnan and his team all success.



Trivandrum Branch Activities in 2017

Guest Lecture in Student Chapter

A technical lecture on 'Engineering Standards' was organised for the student chapter at Lourdes Matha College of Engineering on 17th February 2017 by Shri. K. R. Mohan Ananthanarayanan, Secretary, NIQR Trivandrum Branch & Head Quality Division External Mechanical VSSCISRO.

One Day workshop on Quality Management System-Requirements

NIQR TVM Branch organised a one day workshop on 3rd March 2017 at Hotel Apollo Dimora Trivandrum.

120 delegates attended the programme beating the expectations on the participations planned.

Shri. C. Athipagavan, Vice-chairman of the Branch welcomed the participants and guests.

The workshop was inaugurated by Shri. S. Somnath, Director LPSC. In his inaugural address he mentioned the importance of QMS in a production environment and appreciated the efforts of NIQR in organizing the workshop. He also noted that faculties are all well experienced and the workshop would add value to the participants.

Dr. B. Valsa, Deputy Director VSSC Systems Reliability gave the felicitation address mentioning that VSSC has been successfully certified ISO 9001 2015 and the exercise done in the centre would be shared in the workshop.

Shri. C. A. Ignatious, Chairman of the Branch released course CD containing the lectures of faculty and wished the function all success.

Shri. K. R. Mohan Ananthanarayanan, Secretary of the Branch briefed about the workshop and the details of topics covered.

There were five lectures:

- Experience of implementing ISO 9001 2015 in VSSC was shared in the lecture by Shri. S. Saratchandran, Group Director SR.
- Shri. Sanub Fazil of Tata Elixi gave a lecture on the details of transition to ISO 9001:2015 in an industry.
- Shri. K. M. Kalyanansundaram, Quality advisor to Ananthapuri Hospitals talked about the "Risk Management and experiences in implementing QMS in hospitals with case studies".
- Dr. S Aniyam, AGM Brahmos Aerospace Thiruvananthapuram Limited presented about AS 9100 implementation with a lot of interaction with participants.
- Shri. K. R. Mohan Ananthanarayanan, Head Quality External Work Centre Mechanical, Systems Reliability, VSSC presented the overview of NADCAP requirements for special process with case studies.

Delegates gave very good feedback and appreciated the time management and topics for the workshop. The secretary proposed a vote of thanks.



One Day Workshop on NDT for Non-NDT Professionals

NIQR TVM Branch organised a one day Workshop on NDT for Non-NDT Professionals. Shri. C. A. Ignatius, Chairman of the Branch presided over the inaugural function. The workshop was inaugurated by Shri. S. Pandian, Director, ISRO PROPULSION COMPLEX, Mahendragiri. In his inaugural address he gave an outline of usefulness of NDT in aerospace systems and congratulated the team for organizing the programme.

Course note CD was released by Shri. Narayanan, Deputy Director, SR LPSC ISRO. In his felicitation address he mentioned that the NIQR branch had conducted regular programme of good quality over the past years.

Shri. K. R. Mohan Ananthanarayanan, Secretary of the Branch briefed about the workshop and the details of topic covered. There were 63 delegates out of which 30 were students from student chapters of the branch.

There were four lectures:

- Approach to Non-Destructive Testing by Shri. M. Arumugam, Group Director, R&QA LPSC
- Fundamental NDT Methods by Shri. S. Adal Arasu, DGM NDT VSSC (retd.)
- Setting up an NDT Laboratory by Shri. S. Raju, Head NDT Laboratory RFF VSSC
- NDT certification and Standards by Shri. K. R. Mohan Ananthanarayanan, Secretary of the Branch



Annual General Meeting

AGM of NIQR TVM branch was conducted on 20th September 2017. The AGM was preceded by an interesting and informative lecture on "Biomimicry: How nature Inspires Engineering Quality and Reliability" by Dr. Arun Surendran, Principal and Strategic Director of the Trinity College of Engineering, Thiruvananthapuram. 63 members attended the AGM.

Quality Day Celebrations

Quality Day 2017 was organised on 23rd November 2017 at Hotel Pankaj, Thiruvananthapuram. Student chapter members from Amal Jyothi College of Engineering presented about how smart cities can be developed titled 'Smart Future - A Quest for Utopia'. Presentation covered various aspects beginning from definition of smart city, barriers for smart city, how city can be marked smart, major international standards like ISO 37101, 37120, BIS PAS 181 etc.,. It was an excellent effort by the student chapter. In his lecture on 'Quality as I experienced', Shri. L. Muthu, Former Deputy Director, LPSC gave the youngsters an insight into how quality is getting integrated in a complex system like launch vehicle technology.

During the period 3 life members joined the branch and 323 student chapter enrolled at Amal Jyothi College of Engineering Kanchirapally, Kottayam.

Members in News

Captain (Dr) Singaraja, Senior NIQRian (80+ YEARS YOUNG) and former ECM of NIQR Chennai Branch has been awarded "Dr. Suganchand Bhatia Memorial Award" for writing a Book on 'Issues of Senior Citizens' by All India Senior Citizens Association. Dr. V. Swaminathan, National Vice President, NIQR re-presented him with the award on 11th November 2017 during Lecture Meeting by Nr. Gopi Kumar and all participants wished him many more healthy years to receive more such awards.



ASSOCHAM India organised an interactive session with Honourable Smt. Nirmala Seetharaman, Union Minister of Defence, Govt. of India on 17th November 2017 at Accord Metropolitan Hotel, Chennai. It provided an excellent opportunity to representatives from different industries, especially MSMEs and various associations to hear and interact with the Defence Minister about significant opportunities in defence manufacturing. NIQR was well represented by a ten member team led by **Mr. P.K. Aggarwal, National President.**



Sqn Leader Unni Krishnan Nair, Life Member, NIQR visited the Central Prison in Puducherry on 26th November 2017 for an event organised by Puducherry Raj Nivas Secretariat for entertainment for the inmates; he completely engaged with the inmates with a series of songs for an hour and made the inmates forget the environment for the period.



The American Society for Quality (ASQ) is a Global Leader in Quality Improvement & Standards. The 'ASQ South Asia Quality Professionals Award' is given to the foremost quality professional in the region across all industries, who has demonstrated his/her leadership in the quality field, led organizations to exemplary performance improvement and have contributed significantly to the knowledge base in this field.

In its first edition, this award was presented to **Mr. R. Sivanesan, Former National President NIQR & Sr. Vice President, Quality, Sourcing & Supply Chain, Ashok Leyland Limited** on 1st December 2017, in ASQ South Asia Conference on Quality & Improvement held at New Delhi, for his exemplary achievements in this field.

Dr. Vinod Surana, National Executive Council Member, NIQR has been elected as Vice Chairman of the prestigious All India Manufacturers Organisation, Tamilnadu State Board. In the next two years, Dr. Surana's priorities will be to promote Skill Development in Tamilnadu in emerging areas such as Automation, Robotics, Artificial Intelligence, Autonomous Vehicles/Drones etc., and help establish a high-tech Defence Manufacturing Cluster in the Greater Chennai Region.



Dr. G. Saravanan, Life Member of NIQR has been awarded the "ABRAHAM LINCOLN EXCELLENCE AWARD" for Excellence in Educational Leadership, Community Development and Social Responsibility on 10th December 2017 by The International Peace Council USA which is a registered organization in US aiming towards building peace & harmony and working with the community leaders from around the world through various programs that aim to promote peaceful existence.



Mr C Sundaravadivelu, ECM of NIQR Chennai Branch has undergone a 5 day intensive ZED - Consultant programme conducted by QCI along with Certification Body TUV Nord, Chennai at Hotel Ramada, Egmore in Chennai between 27th Nov'17 to 1st Dec'17. The programme focused mainly on the process of consulting and creating necessary consulting skills for ZED.



Prof. C. Uthayakumar, ECM of NIQR Chennai Branch has undergone a 5 day intensive ZED - Assessor training program organised by QCI held at Chennai Institute of Technology in November 2017 and ZED - Master Trainer Training Program organised by QCI held at Federation of Karnataka Chamber of Commerce at Bangalore in December 2017. These programs covered ZED Maturity Model, Assessment process, Consulting Process and the Training skills using case studies and interactive group exercises.



We are proud that as of now we have four ZED specialists in our NIQR list of Panel of Experts.

SIX SIGMA : Beyond the Bell Shaped Curve

The bell shaped curve rules statistical thinking. We are quick to think in terms of mean and standard deviations when we see data of any kind. The bell shaped or the Gaussian curve of the normal distribution serves as a useful first order approximation to several physical phenomena.

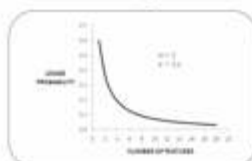
If we scratch beneath the surface and explore, we come across several non - normal distributions.

It depends largely on what we see. While studying reliability, Weibull saw a distribution in failure data which was later named after him. While studying the breaking of cotton threads, Gumble saw Gumble distribution in strength of data. Gompertz distribution represents the growth... and so on... there are so many of them to choose from. Distributions are usually named after inventors who saw the need of them. They chose to break free from Normal Distribution in order to accommodate special failures in data. True to science, no scientist force fitted data to the bell shaped curve. But we do more often inadvertently.

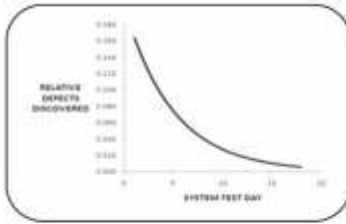
This dilemma is faced by automobile managers. Most processes related to manufacturing do not follow the bell shaped curve.

Some of the examples of non- normal distribution that represent development processes:

1. Pareto: Feature Usage: Not all the development features are used often in the field. A Pareto distribution, reflecting the 80/20 rule, is used to model feature usage.



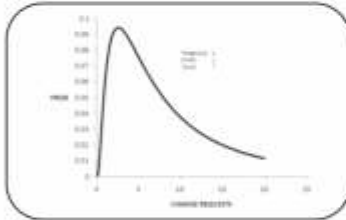
This model can inspire testing plan. Features expected to use more are tested thoroughly.



2. Exponential : Defect Discovery

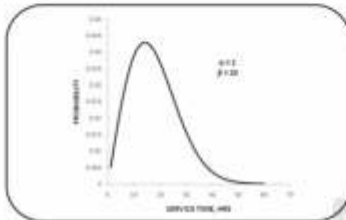
As product testing makes progress, defects uncovered fall by the day, as shown in figure 2. The distribution is exponential and serves a foundation for reliability growth models.

This model has several uses including in deciding when to stop testing and also grading the reliability level of product during mass manufacturing release.



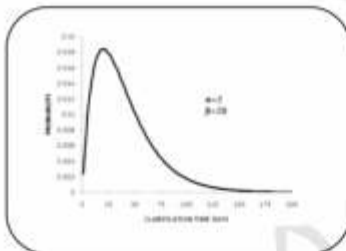
3. Log Normal : Change request

Customer reported change request represent product quality as well as product evolution. There is almost no control the organization has in this number and hence a fat tailed distribution such as Log Normal distribution (Fig 3) would be a more appropriate model.



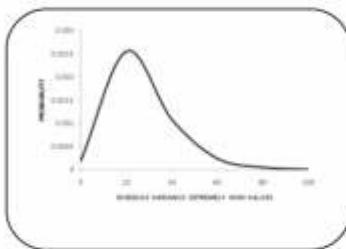
4. Weibull : Service time

A serious departure from the bell shaped curve is service time distribution. There are several forms in which service time is measured. It could be to fix change requests. The simplest case is bug fixing time. Typically the Weibull model would fit these processes, as is shown in figure 4



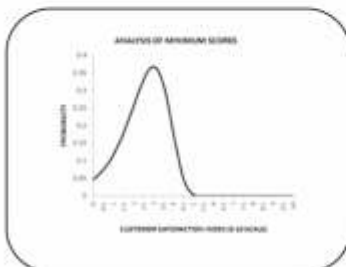
5. Gamma : Clarification Time

A major problem- an uncontrollable factor - in project is customer clarification time. It could become days before the customer clarifies a change request. Sometimes he could be engaged in a series of meetings. The maintenance team just waits on and on till the customer responds. Fat tailed curves are required to represent this problem and in our case the GAMMA function is used as shown in figure 5. Unpredictability of the situation drives us to this choice.



6. Gumbel Maximum : Schedule variance

The more familiar experience is that variance metric follow the bell shaped curve. It is very much so in the case of effort variance. But the schedule variance is a different kettle of fish. When delivery is delayed it could be extremely delayed, almost in accordance with Murphy's law. In our case we face a highly complex situation. Huge delays have been experienced in project pushing us to use extreme value function such as the Gumbel Maximum model shown in Fig 6.



7. Gumbel Minimum : Customer Satisfaction minimum score

Instead of using the metric customer satisfaction score we have the minimum score - a statistic - as seen as in every survey. The minimum values follow Gumbel Minimum Distribution shown in Figure 7.

Conclusion: Seven Simple examples of distribution other than Bell Shaped Curve have been discussed in this article; in each case it is almost possible to have used the Gaussian Curve and arrived at simple picture.

Conclusion:

Seven Simple examples of distribution other than Bell Shaped Curve have been discussed in this article; in each case it is almost possible to have used the Gaussian Curve and arrived at simple picture.

Discovering the right distribution has helped us to understand subtle features in processes.



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ECM, NIQR Delhi NCR Branch

Standards Organizations That Affect You-3 (Whether You Know It Or Not)

There are thousands of standards organizations around the world, and they can standardize pretty much anything to make life easier, safer, and more productive. Often, these bodies have agreements to cooperate with each other. They may endorse each other's standards, build upon them, or purposely avoid duplicating efforts.



In this series of articles we will understand the top standards organization for their establishment, method of developing standards and their contribution towards industrial development.

The International Telecommunication Union (ITU) is a specialized agency of the United Nations. Its original name was the International Telegraph Union, and it was founded in Paris in 1865. It serves the field of information and communications technology (ICT). Now headquartered in Geneva, it has a membership of 193 countries and over 700 private-sector entities and academic institutions. It operates using the six official languages of Arabic, Chinese, English, French, Russian, and Spanish.

The ITU allocates global radio spectrum and satellite orbits. It also develops technical standards for interconnecting networks and other technologies in international telecommunications. Standards from the ITU are called "Recommendations," and there are more than 4000 of them. The 10 primary study groups producing standards within the ITU address categories such as broadband cable and TV, quality of service and experience, protocols and test specifications, security, and future networks. They also work on multimedia, environment and climate change, & transport, access, and home.



they guarantee the interconnectivity of networks and enable telecommunication services to be provided on a worldwide scale.

Non-normative outputs include Appendices to Recommendations, ITU-T Handbooks, Implementer's guides and Supplements.

Another ITU-T product is the Operational Bulletin, which is a fortnightly detailed update containing information that is required to maintain the global interconnection of the world's telecommunication networks.

Regional Groupings

Member states of the ITU are organized into six regional groups:

- Asia-Pacific Telecommunity (APT)
- Arab Spectrum Management Group (ASMG)
- African Telecommunications Union (ATU)
- European Conference of Postal and Telecommunications Administrations (CEPT)
- Inter-American Telecommunication Commission (CITEL)
- Regional Commonwealth in the Field of Communications (RCC - representing former Soviet republics)

From 1979 onwards India has become a member of ITU through APT and is actively participating in development of Information and Communication Technologies.

The recent interesting findings published by ITU are,

- 3.2 billion people are now online (43% of the population)
- The number of Internet users in developing countries has almost doubled in five years
- Mobile cellular subscriptions are up to 7.1 billion from 2.2 billion in 10 years
- 3G population network coverage has increased from 45% to 69% in four years
- The Internet-use gender gap is at 11%
- Between 2013 and 2014, mobile broadband prices dropped by over 25% in least-developed countries
- The Internet of Things (IoT) and Big Data hold the potential to address major development challenges



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Announces Third Annual Competition on **SIX SIGMA Case Study Presentation**

On 27th January 2018 (Saturday)
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