

Quality & Quality Tools



Inspection & Testing Services CMD



Dr. Sundar Kataria

"Is Quality Free? If you are out of quality, you are out of business."

At ICS, we consider ourselves fortunate to derive 80% of our revenue from Third-Party Inspection services, supported by a workforce comprising 90% of our team. Our involvement spans numerous projects nationwide, with a primary focus on the Oil & Gas sector.

In the seventy-five years of India's independence, the business landscape and socio-economic fabric of the nation have undergone phenomenal and pragmatic changes in the last decade. These changes include:

- Globalization
- Liberalization/Privatization
- Changing Work Culture
- New Entrepreneurs/Startups
- Empowerment of Women
- Information Technology Explosion
- Technical Explosion
- Government focus on MSMEs
- Political Stability
- Availability of Finance



Government regulations have actively sought appropriate measures to regulate workplaces, ensuring sustained economic growth without compromising the safety, occupational health, and well-being of the workforce. New regulations in India have been introduced to meet both national and international requirements while accommodating Indian conditions and traditional thinking.

Three decades ago, the European Union introduced ISO Management systems to establish harmonized, internationally recognized standards. While there was initially a concern that these requirements would reduce inspections, the opposite has occurred, with inspection and testing demands increasing significantly.

Quality assurance and quality comfort play a vital role in ensuring the quality of products and services. I vividly recall my active engagement in the construction of India's first Nuclear Power Plant at Rajasthan Atomic Power Station, Kota, during the 1960s and 1970s. Working in a state-of-the-art workshop for the manufacturing of nuclear equipment, components, and systems, we adhered to 33 welding procedures for various metals with close precision.

Independent inspections were conducted using visual, non-destructive testing (NDT), and destructive testing (DT) methods. For instance, I was responsible for the primary heat transfer system, which required not just close tolerance but a battery of tests to ensure foolproof weld joints. These included X-ray examinations, hydro tests, pneumatic testing, helium leak tests, and thorough cleaning and passivation processes. Our Quality Assurance/Quality Control (QA/QC) departments scrutinized every stage of activities, from material inspection and fabrication to final testing and documentation as per approved Quality Assurance Plans (QAP).

This experience instilled in us a profound understanding of state-of-the-art nuclear technology and its importance.

At ICS, we are committed to venturing into high-technology areas such as Nuclear, Space, Mining, and the Automobile sector. Our goal is to offer inspection and testing services for high-value products and services, continuing our legacy of excellence.

Inspection & Testing, Verification & Certification

In the contemporary business landscape, the ancient proverb "THE CUSTOMER IS KING" still holds true. Customer expectations regarding the quality and safety of products and services have steadily risen over time. The modern consumer demands the highest quality, given the vast array of choices available in the global market.

The genesis of a focus on product quality can be traced back to the lessons learned during World War I and World War II, prompting the development of robust quality management systems. The inception of the "Total Quality" system occurred in the United States, a response to the quality revolution in post-World War II Japan. Japanese manufacturers, both for defense and civilian goods, collaborated with American companies, Quality Gurus, lecturers, and specialists, with notable figures such as Deeming and Juran playing key roles.

Japanese initiatives aimed at improving product quality by enhancing organizational processes through the application of American Quality Modules and management systems. This approach resulted in Japan producing higher-quality exports at lower costs, benefitting consumers globally.

Quality History



Simultaneously, a multitude of quality tools was developed and adopted by manufacturers worldwide to control, monitor, and enhance quality. Some widely used quality tools include Process Flowcharts, PDCA Cycle, Control Charts, Statistical Quality Control, Graphics (line, bar, and circle charts), 5S, Six Sigma, Fishbone Diagrams (cause and effect diagrams), Pareto Charts (80:20), among others.

While concepts of quality and management principles existed independently for some time, they were often treated as unrelated topics. An advanced idea emerged, asserting that Quality requires the continuous application of management principles. These principles include Customer Focus, Leadership, Engagement of People, Process Approach, Improvement, Evidence-Based Decision Making, and Relationship Management.

The Total Quality Management (TQM) system was introduced, with pioneers developing the principles and techniques required for its implementation. Top management support and involvement, aligned with corporate culture and strategy, were recognized as crucial for the success of TQM.

The forces of globalization have compelled industries in the private, public, and government sectors to adopt various ISO management systems to remain competitive in the international market. Today, ISO provides numerous sector-specific management systems for manufacturers and service sector industries to choose from, including:

- ISO 9001:2015; Quality Management System
- ISO 14001:2015; Environmental Management System
- ISO 45001:2018; Occupational Health & Safety Management System
- ISO 22000:2018; Food Safety Management System
- ISO 27001:2022; Information Security Management System
- ISO 21001:2018; Education Management System
- ISO 13485:2016; Medical Devices Management System
- ISO 22301; Business Continuity Management System
- ISO 50001; Energy Management System, and many more.

The adoption of these ISO management systems reflects a commitment to quality, safety, and environmental responsibility in today's dynamic and competitive business environment.



Mr. Bhimraj Thorat

What is Quality... ?

Principal Consultant (QMS-9001/EMS- 14001/FSMS-22000)

What is Quality... ?

- Fitness for use.
- Conformance to Specifications.
- Customer satisfaction....

There are many definitions of quality, but how you will get there....? Quality control is important for maintaining efficiency in many processes. So to get desired quality, there are number of simplified tools and you just need to monitor and act positively. Quality tools are methods of collecting, organizing or interpreting data or reviewing the strategies of a different process & potential issues. Which helps quality control professionals implement viable solutions on root cause.

It Says: Unless you monitor you will never improve.

Or

If You Can't Measure It, You Can't Improve It.

Mainly there are seven basic Quality Tools, and few more you can use to reach there:

1. Histograms:

One of the seven original QC tools, a histogram is a graph that displays a process's collected data. For example, you can display the number of errors that occur per day on the graph's x-axis and their frequency on its y-axis. Then, you can draw lines from these points on the axes until they intersect, allowing you to draw bars with different heights underneath. After making the histogram, you can analyze its shape, or distribution, to help you better understand the frequency of quality control issues.



2. Cause-and-Effect Diagrams:

Cause-and-effect diagrams, also called fishbone or Ishikawa diagrams, are another original QC tool. They can help you analyze how one variable in a process affects another, which help you determine which variables may cause quality control issues in a production process. This diagram usually includes six categories of causes for variation in quality: Environment, Machines, Materials, Measurement, Methods & People.

3. Check Sheets:

Check sheets, or tally sheets, are a system of gathering and tracking data. Check sheets contain a list of the types of problems a process can encounter. Each time the problem happens, an employee puts a tally mark next to the associated space for that problem on the sheet. Employees can add to the check sheet actively to track trends. This allows you to keep a quantitative record of the frequency of problems. Check sheets are helpful because they can help you streamline data and assess a quality control situation quickly.

4. Pareto Diagrams:

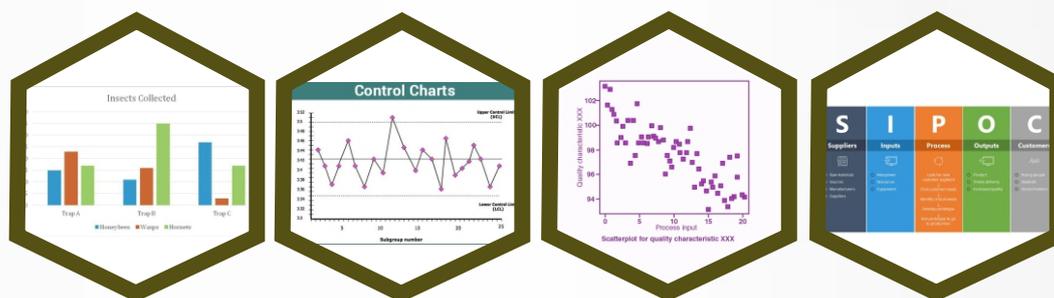
Pareto diagrams use a mathematical business concept called the 80-20 rule, which assumes that a few factors likely cause the majority of all quality control issues. It allows you to identify these factors efficiently. They're often bar graphs that list causes of production problems in descending order by type of issue on its x-axis and frequency on its y-axis. The Pareto diagram also requires you to calculate the cumulative percentage of these issues, which is represented by a line on the graph.

5. Graphs:

Also called Stratification, this tool includes any charts that monitor and analyze production quality, sort data, objects and people into separate and distinct groups. The goal of stratification is to divide and classify data so you can derive meaningful information & go for further analysis using descriptive, graphical representation or advanced level of statistics helps to understand the existing problem.

6. Control Charts:

Control charts, or Shewhart charts, can help you decide whether a process results in consistently high-quality products or produces excessive variations. The control chart displays lines defining an upper and lower control limit, plus the data mean. If there are data points outside of the control limits, there could be a potential issue in the overall process worth exploring further.



7. Scatter Diagram:

Scatter diagrams are a method to display existing Strength, Direction & relationships between two quantitative variables or data types. A scatter diagram can help you look for cause-and-effect relationships. A correlation coefficient measures the strength of that relationship.

8. The 5 Whys:

The 5 Whys is a quality tool designed to help you determine the cause of a production issue. The concept of this tool is to ask "why" five times to determine the root cause of a problem. For example, you might ask, "Why did my product get rejected?" Afterward, you can use the answer to this question to form a second, more in-depth inquiry. This method is usually best for simpler issues since it's a straightforward questioning process designed to find one to two potential causes.

9. Affinity Diagram:

An affinity diagram, is a problem-solving method. Using an affinity diagram, you can approach an issue from multiple perspectives to get the most information possible about a quality control issue. The first step is to define an issue, such as poor customer satisfaction with the quality product.

10. SIPOC Diagram:

Suppliers, inputs, sub-processes, outputs and customers (SIPOC) diagrams, sometimes called flow diagrams, are a method of outlining and summarizing a process. They help identify essential parts of a process or find areas of weakness. To perform an SIPOC diagram, you typically define and identify how each area relates to the process you want to analyze.

11. Failure Mode and Effects Analysis

In a failure mode and effects analysis (FMEA), you can consider possible failures in a process and categorize them based on severity, frequency and detection. Severity refers to the impact of the failure, while frequency is the rate of failure occurrence and detection describes how easy or challenging it might be to detect errors in a process.

12. PDCA Cycle:

The PDCA cycle is a continuous loop of planning, doing, checking (or studying), and acting. It provides a simple and effective approach for solving problems and managing change.

Plan: Recognize an opportunity and plan a change.

Do: Test the change. Carry out a small-scale study.

Check: Review the test, analyze the results, and identify what you've learned.

Act: Take action based on what you learned in the study step.

John Ruskin Says

“Quality is never an accident. It is always the result of intelligent effort.”

Finally you needs to:

- Determine which tool can best help you identify quality control issues.
- Consider which tool can help you analyze these issues.
- Identify which tool may allow you to improve quality over time.
- Assess which tool can help you prioritize quality issues effectively.
- Learn which tool can give you more in-depth information about a problem or process.



Mr. Girish Bhide

Quality in business operations

Consultant, Trainer & Facilitator

Quality management is an essential aspect impacting modern business operations to ensure that products and services meet or exceed customer expectations. Various quality tools become integral part of any quality management. A quality tool usually comprises of methods and techniques for analyzing data, identifying issues and driving continuous improvement.

The 5 Core Quality Tools (APQP, PPAP, FMEA, MSA, SPC) are a set of sequential methods that form the essentials of a quality management system (say based on the IATF 16949 standard) . The focus is to eliminate or reduce potential errors early in the manufacturing process rather than later— prevention vs cure. In the manufacturing industry, the cost of poor quality (COPQ) measures cost associated with process and product failures. The 5 Core Quality tools pre-emptively reduce COPQ by addressing problems, especially fatal flaws, before they come major problems after a product has been released. Out of the 5 core Quality tools, FMEA is a method used to identify potential failure modes within a system.



What is Failure Mode and Effect Analysis (FMEA) ?

FMEA helps us to understand what could potentially cause a problem and the effects of failure. It allows us to assess the likelihood of such an event occurring and its impact on our business if this does happen. FMEA can be applied to any process or product in any organization.

It is a proactive tool and is a dynamic document and is used to identify potential risks early in the development cycle. It also can be used to identify potential risks before they become problems, can be used to reduce risk by identifying ways to prevent failures from happening, also ensures safety through understanding the consequences of failure.

Risk Priority Number (RPN) in FMEA

An FMEA looks at three criteria when assessing a problem:

1) The Severity level (scale 1 to 10) of the problem for the user - (S)

Severity 1 (user might not even notice it) , Severity 10 (Serious safety hazard without warning) , thus higher the number more severe is problem.

2) The probability or frequency of Occurrence of the Problem- (O)

Occurrence 1 - Rare event, Occurrence 10 - Failure is almost inevitable; thus higher the number probability of occurrence is more.

3) The probability or ease of Detection of the Problem- (D)

Detection 1- Current system almost certainly detects the problem (automation), Detection 10 - Current system can not detect the problem. Thus the rating will be high if the issue remains undetected even after the problem has happened.

The Risk Priority Number (RPN) is the multiplication of these three ratings.

$$(RPN) = S (1 \text{ to } 10) \times O (1 \text{ to } 10) \times D (1 \text{ to } 10)$$

Usually it is recommended to follow below steps to carry out an FMEA:

- Identify every step or activity in the process.
- Determine how the failure could occur (brainstorm as small group activity)
- Rank each failure based on its impact (brainstorm in cross-functional teams)
- Look at historical record and determine frequency and associated ratings
- Identify the probability that failure will be detected even before it happens.
- Calculate the RPN by multiplying the three factors (S,O,D).
- Prioritize the potential failures according to their RPN numbers -higher the RPN number, the higher is the priority – highlight these high scores in color.
- Based on the prioritized list, decide what actions should be taken and make the action plan.
- After implementing the changes, repeat FMEA to assess effectiveness and check if RPN is reduced .
-

FMEA studies provide the means to evaluate risk levels thereby establishing a mechanism to prioritize risks. All of this information is used to prioritize actions that will lead to risk reduction and process improvement.

As one of the representative uses in simple manner, FMEA can be used to address relevant clauses in ISO standards. A typical example of a dynamic document is as mentioned below:



Mr. Ajay Kudalkar

QUALITY TOOLS

Consultant, (ISO9001, IATF 16949)

Quality is one of the main devices which an organization relies on it to achieve most of its goals. Traditionally, was consisted of a production workforce which was only worry about adhering to limited commands. But in the past few decades, the manufacturers have recognized that this model became insufficient, not particular for the high level of competition, and the new business environment, derived from globalization, technological, and information and communication revolution. These and other factors led to an increased focus on quality by organizations. Organizations focus has shifted from the approach of quality control to quality circles, total quality management, continuous

improvement, and workers empowerment. Quality, in the sense of satisfying individuals needs, has become a major differentiating factor among products and among organizations, because quality now is a significant measurement tool for the organization's performance

. In today's technologically advance world quality does not mean just to meet the product specification. Even though you design and manufacture great quality products it does not necessarily be accepted by the final customer or a product user. There are plenty of such examples wherein good quality products have failed to get a place in the market. Hence the quality should always start with understanding of customer expectation, his needs and more importantly a usage pattern. A perfect example for the same is automotive industry. If you take look in the auto industry big names like Ford, General Motors, and Honda to some extend have not captured the market in India which they were expected to. Along with the desired quality, a product must have economic price and a good sustained life. This can be achieved only through following modern quality practices and processes.

Now let's understand the quality tools which should be taken into account while design and manufacturing of product. The very first quality tool is to understand the customer expectation and its usage pattern. A company can use various means of capturing customer voice e.g. Kano Analysis, Capture real word usage pattern, Quality Function Deployment, CTQ etc. The real challenge by any company is to convert the customer voice into actual design, the very effective tool use here would be QFD which helps to convert a customer voice into product specification requirement. A design team later on may use various other quality tools like DFMEA, Simulations, DOE, QFD, DVPs and many reliability engineering tools to ensure a product which meets all the customer requirement. These tools are used to make the product more robust and reliable. Designer should take into consideration the unintended use of the product while designing. Involvement of cross functional team consisting of people from various other areas like manufacturing, quality control, service, Purchase is must while designing of a product. A collective wisdom by other functional experts always give valuable inputs at a very first stage of product design, Further when the product comes into manufacturing stage one has to use various quality control tools to ensure the product is manufactured to its required specification in a sustained way. This means a product manufactured today and maybe after a year should have same quality. There are various tools available manly the 7QC Tools. These quality tool mainly comprise of process flow diagrams, check sheet, Histograms, Pareto analysis, Cause and effect diagrams, Scatter diagrams and control charts, Process FMEAs etc. These tools are very effective and have been utilized in all types of industries including Turn key projects having massive investment. These tools helps in maintaining the manufacturing specification within limit in a sustained way, Also a continuous improvement environment is very much necessary for improving not only the product quality but also the business processes. Various certification which are being followed in today's industries emphasis a lot on continuous improvement, process approach using risk base approach.

Hence it is very much necessary for any industries to re-engineer their business processes in line with meeting the customer expectation. Implementation of successful TQM (Total quality management) is a key for any successful organization. TQM ensures a quality approach in all business processes and encourages scope of improvements. Many companies also are now following TPM (Total Productivity Maintenance) to improve the productivity and eliminate the possible non-value added activities.

It is necessary to have role of quality in all the processes that we follow in any organization to produce a product which not only meet customer expectation but give him a wow feeling while using the product.

Training Calendar- February-2024

Course Title	Start Date	End Date	Fees	Duration	Class Type
LA QMS	5th Feb 2024	9th Feb 2024	INR 17,000 + 18% GST	10am to 5.00pm	Online
LA IMS	12th Feb 2024	24th Jan 2024	INR 17,000+18% GST	10am to 5.00pm	Online
LA FSMS	19th Feb 2024	23rd Feb 2024	INR 15,000 + 18% GST	10am to 5.00pm	Online
IQA 13485	26th Feb 2024	27th Feb 2024	INR 7,000 + 18% GST	10am to 5.00pm	Online

Success Mantra

**Quality without results
is pointless. Results
without quality is
boring.**

**quality
today is
quality
forever**



**Quality is never an
accident; it is always
the result of high
intention, sincere
effort, intelligent
direction and
skillful execution; it
represents the wise
choice of many
alternatives.**

**IF THE PLAN
DOESN'T WORK,
CHANGE THE PLAN – BUT
NEVER THE GOAL.**



Horoscope Month of February - 2024



Aries

This month is about harnessing the power of collaboration and using your social connections to achieve your goals. Don't shy away from expressing your bold ideas, but be flexible and adaptable to integrate other's contributions. Opportunities for joint ventures, investments, or even lucrative freelance work can arise through unexpected connections. Focus on quality time with your loved ones, plan exciting outings, and engage in activities that strengthen your bond.



Taurus

This is a potent month to set ambitious goals, take the initiative, and showcase your talents. Expect recognition and potential leadership opportunities. Money matters might feel like a roller coaster. Unexpected expenses could crop up but don't fret. Family ties strengthen as you prioritise quality time. Support loved ones, but don't neglect your own needs. While your overall health appears fine, fatigue and stress might creep in. Prioritise sleep and healthy eating.



Gemini

It's a month for introspection, reevaluation, and potentially shedding old skin to emerge stronger. You might uncover hidden talents or be drawn to challenging, high-stakes projects. Don't shy away from delving into the complex or pursuing unconventional paths. Financial matters might require scrutiny and wise investments. Be cautious of risky ventures and sudden spending urges. This is also an excellent time to explore alternative healing modalities or address lingering emotional issues.



Cancer

It's a month for introspection, reevaluation, and potentially shedding old skin to emerge stronger. You might uncover hidden talents or be drawn to challenging, high-stakes projects. Don't shy away from delving into the complex or pursuing unconventional paths. Financial matters might require scrutiny and wise investments. Be cautious of risky ventures and sudden spending urges. This is also an excellent time to explore alternative healing modalities or address lingering emotional issues.



Leo

Buckle up for a dynamic month filled with collaboration, opportunities, and personal growth. Polish your social skills and leverage your connections. Be open to unexpected opportunities that could lead to financial gains. Remember, teamwork makes the dream work. Don't be afraid to express your affections boldly. Family ties strengthen as you prioritise quality time. But be mindful of potential power struggles within the family dynamics, and approach situations sympathetically..



Virgo

This month encourages you to be diligent and meticulous. You'll shine in roles demanding precision and organisation. Take initiative, offer solutions, and showcase your expertise. Negotiate raises confidently, explore freelance options, or invest in skill development. Romance might take a backseat to shared responsibilities or acts of kindness. However, don't neglect affection – a thoughtful gesture or a helping hand can speak volumes. Consider preventative health measures like checkups.

Horoscope Month of February - 2024



Libra

Family ties deepen this month. Expect heart-warming gatherings and meaningful conversations. Offer support to loved ones in need, and don't shy away from expressing your emotions. At work, your communication skills will be razor-sharp, making presentations and negotiations flow effortlessly. Financial gains are possible, but be mindful of overindulging in your newfound pleasure-seeking tendencies. Attend social gatherings and indulge in flirtatious banter, but don't confuse fleeting flings with genuine connections.



Scorpio

While career pursuits may take a backseat this month, focusing on your inner world can profoundly impact your overall well-being and future direction. At work, maintain professionalism and focus on completing ongoing tasks diligently. Relationships with parents, siblings, or housemates could require your attention. If single, you might encounter someone special through family gatherings or social events within your close circle. Prioritise saving and creating a secure financial foundation.



Sagittarius

Your mind will buzz with ideas this month, and you'll have a strong urge to express yourself and connect with others. This is a great time to learn new skills and embark on new projects. This is an excellent time to market yourself or your business, as your communication skills are sharp. However, be mindful of not over promising or appearing scattered. However, with so much mental energy, finding healthy outlets and avoiding burnout is important. Singles might find romance through online connections..



Capricorn

This is an auspicious month for career growth. A promotion, raise, or recognition for your hard work could be on the horizon. Don't shy away from expressing your ideas and taking initiative. Network strategically, and be bold in pursuing your goals. Singles, your focus might be on building your career and finances first, leaving romance on the back burner. Those committed should express appreciation to their partner and spend quality time together.



Aquarius

The planets are aligning for professional growth this month. You'll exude confidence and decisiveness, attracting recognition and opportunities. You might receive unexpected gains or secure lucrative deals. However, avoid impulsive spending and prioritise long-term investments over fleeting luxuries. Be open to unexpected connections, but don't rush into anything serious. Offer support, be present for your loved ones, and respect their individuality.



Pisces

This is a month for emotional healing and strengthening family bonds. Forgive past hurts and nurture your loved ones with compassion and understanding. Singles might encounter someone special through spiritual connections. You might succeed in research, writing, or any field requiring solitude and focus. Trust your intuition when making career decisions; don't be afraid to explore unconventional paths.



Birthday's Month of February - 2024...



Sr. No.	Emp. Name	Station	Emp. Dob
1	Pooja Chandran	ICS -Assure - Reconstruction	01-Feb-1999
2	Rupali Bhowad	ICS -Assure	01-Feb-1998
3	Sunil Kumar	ECD-ADANI GJ	01-Feb-1990
4	Gagan Kumar Singh	ICS -Reliance Ro Project	01-Feb-1994
5	Krishna Kumar Yadav	ICS -IGL New Delhi	01-Feb-1993
6	Dadasaheb Kokare	ICS -ONGC-Uran	02-Feb-1979
7	Chandan Kumar	ICS -ONGC-Bokaro	02-Feb-1994
8	Harikesh Kumar Yadav	ICS -IGL New Delhi	02-Feb-1986
9	Mayur Parmar	ICS -ONGC-WADU	02-Feb-1997
10	MohdSaqib	ICS -Torrent Gas July 2022	02-Feb-1996
11	Mustafa Alam	ICS -MGL Steel	02-Feb-1985
12	Shraddha Chavan	Mumbai-HR	02-Feb-1998
13	Amod - Yadav	ICS -IGL New Delhi	03-Feb-1996
14	Izhan Shaikh	Mumbai-Marketing	03-Feb-1997
15	Manoj Kumar Yadav	ICS -RBML Electrical Safety	03-Feb-1996
16	Manoj Kumar Pal	ICS -Assure - Health	03-Feb-1990
17	MdManzar	ICS -ONGC-Offshore	03-Feb-1994
18	Nirav Rathod	Mumbai-Admin	03-Feb-1997
19	Aakif Zhari	ICS -Assure - Property	04-Feb-1996
20	Chandra Bhushan Kumar	ICS -Reliance Ro Project	04-Feb-1990
21	Priyanka Pol	ICS -Assure - Health	04-Feb-1997
22	Anand Pal Singh	New Delhi	05-Feb-1968
23	Faizan E Anwar	ICS -ONGC-Bokaro	05-Feb-1998
24	MD Faisal	ICS -HPCL Vizag Shutdown	05-Feb-1998
25	Bhargav Prajapati	ICS -ONGC-WADU	06-Feb-1997
26	MohitKumar Omprakash	ICS -IGL New Delhi	06-Feb-1993
27	Juned Khan	ICS -Assure - MotorOD	06-Feb-2001
28	Ujjal Saha	ICS -Reliance Ro Project	06-Feb-1990
29	Shubham Choudhary	ECD- HPCL-RBPL	06-Feb-1995
30	Panneer Selvam	ICS -VENDOR	09-Feb-1968
31	Anzar Salam	ICS -IOCL Panipat Shutdown	08-Feb-1994
32	Abhishek Kumar Singh	ICS -VENDOR	10-Feb-1989

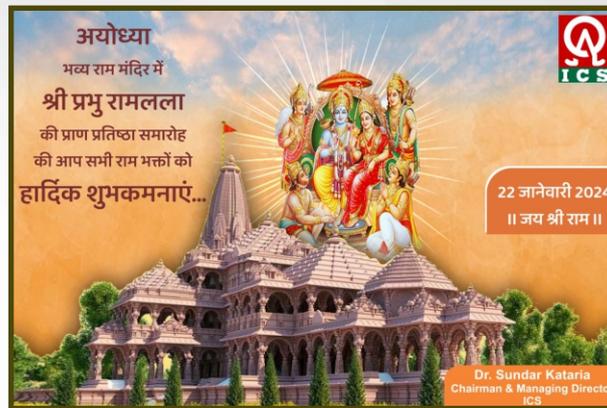


Birthday's Month of February - 2024...

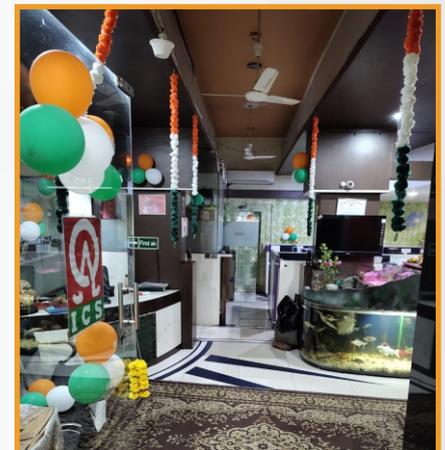
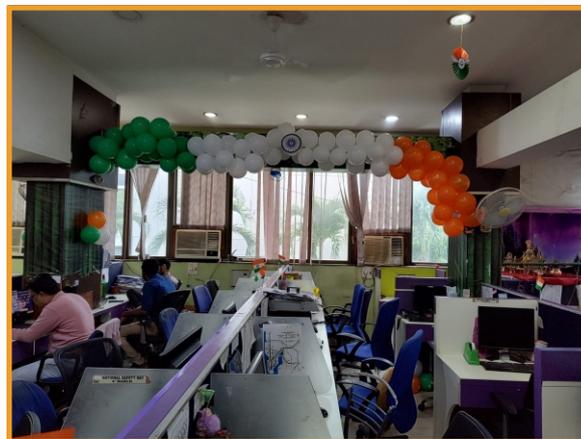


Sr. No.	Emp. Name	Station	Emp. Dob
33	Devendra Sen	ICS -Reliance Ro Project	10-Feb-2001
34	Mukesh Kumar Dubey	ICS -IOCL Haldia Shutdown	10-Feb-1992
35	Mohammadsufiyan Dabhoiwala	ICS -ONGC-Ankleshwar	10-Feb-1994
36	Pradeep Kumar Shukla	ICS -Torrent Gas July 2022	10-Feb-1989
37	Vikas Sagar	ICS -IOCL Panipat Shutdown	10-Feb-1993
38	Shubham Ravindra Landge	ICS -MNGLNashik	11-Feb-1998
39	Sushma Kindalkar	Mumbai-Technology	11-Feb-1989
40	Ahmad Helal	ICS -ONGC-Cambay	12-Feb-1995
41	David Sangma	Training centre	12-Feb-2003
42	Shashank Sekhar Dash	ECD-IOCL	12-Feb-1995
43	Md Arman	ICS -ONGC-MUMBAI-CIVIL RO	12-Feb-1992
44	Manishkumar Mansukhbhai Bhayani	ICS -Torrent Gas-Junagarh	13-Feb-1998
45	Pranali Jadhav	Mumbai-TPA	14-Feb-1998
46	Naseeb Ansary	ICS -ONGC-Hazira	14-Feb-1994
47	MD Faizan Hashmi -	ICS -IOCL Guwahati	15-Feb-1997
48	Md.Faisal Ansari	ICS -ONGC-Offshore	15-Feb-1993
49	Md Abutalib Ansari	ICS -Reliance Ro Project	15-Feb-1995
50	Dron Kumar Bhalya	ICS -IGL New Delhi	15-Feb-1995
51	Pradeep Singh	ICS -Reliance Ro Project	16-Feb-1999
52	Alpeshkumar Pratapji Purohit	ICS -ONGC-WADU	16-Feb-1994
53	Ram Kumar	ICS -Torrent Gas July 2022	17-Feb-1991
54	Md Alamgir Hossain	ICS -ONGC Tripura	17-Feb-1992
55	Pritam Mule	ICS -MNGL-Pune	18-Feb-1993
56	Mukesh Kumar	ICS -ONGC South Goa	18-Feb-1986
57	Chirag Kirtibhai Patel	ICS -ONGC-Mehsana	20-Feb-1996
58	Faizan Raza	ICS -HPCL Vizag Shutdown	20-Feb-1996
59	Pratik Thakre	ICS -ONGC-MUMBAI- CIVIL RO	20-Feb-1990
60	Sushil Kumar Sah	ICS -MNGL-Pune	20-Feb-1990
61	Rahul Gupta	Mumbai-ECD	20-Feb-1994
62	Dhirendra Kumar Dhiraj	ICS -IGL New Delhi	21-Feb-1996
63	Indrajeet Supekar	ICS -Torrent Gas-Pune	26-Feb-1992
64	Sameer Khan	Mumbai-TPI	27-Feb-1995
65	Ajay Yewale	Pune	28-Feb-1998

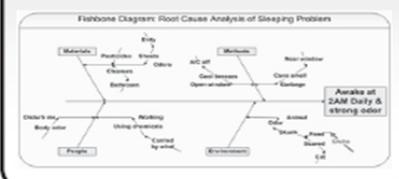
ICS Festival Greetings



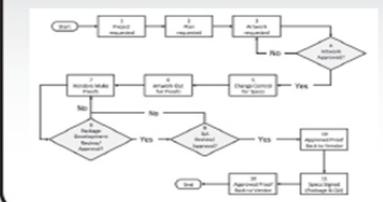
ICS Celebrating Republic Day & Quiz Comptition



Cause & Effect Diagram



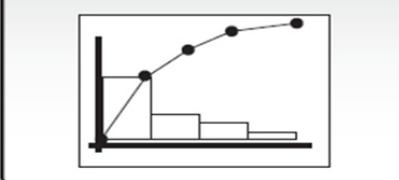
Flowcharts



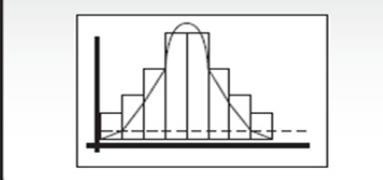
Checksheets

Category	Strokes	Frequency
Attribute 1		
Attribute 2		
Attribute ...		
Attribute n		

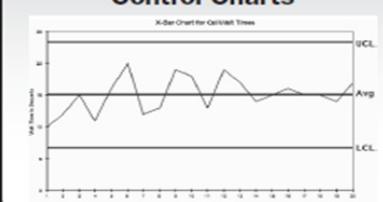
Pareto Diagrams



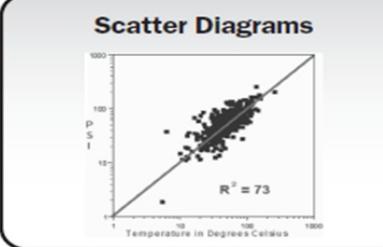
Histograms



Control Charts



Scatter Diagrams



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