

Special Issue On QA/QC, Inspection & Verification of City Grid Gas Pipeline Network (Life Line For Industry and Domestic Supply Of NGL)





Dr. Sundar Kataria

The Quality concept started right from medieval era, whereas the craftsman developed their guidelines & rules for the quality of their manufactured products and services in the 13th century. Thereafter the first world war and second world war provided right platform and boost to the development of quality standards for products, and the quality management system to produce enhanced quality of the products and services to ensure its performance and life cycle

Inspection & Testing, Verification & Certification
Quality Assurance / Quality Control
CMD



Total Quality Management System
Quality Management System
Inspection Testing
Craftsman Quality

Evaluation of quality started with craftsmen quality control thereafter inspection and testing of finished product whereas the holistic approach started with quality assurance system. Right from concept design, design and development, procurement of raw materials, processing, inspection and testing to final packaging and supply whereas quality is checked at every stage to ensure final products and services, quality is good conforming to the technical specification that will ensure product life cycle to meet the customer / consumer requirements.

Thereafter further development took place w.r.t. the quality concept after the second world war mainly in Japan and US, quality management system followed by “Total Quality Management System”. There has been number of quality tools developed to support TQM.

We at ICS are celebrating World Quality Day every year for the MSME, manufacturing and service sector industries for the past two decades. We are also conducting on-line webinars every Saturday for MSME covering management system, quality tools and technology. We have successfully completed 215 meets until last year, 2024.

We continue our journey towards excellence in Quality and Management System to serve the Nation to carry forward our National Program launched by our beloved Prime Minister for Atma Nirbhar Bharat, Make in India and Swabhiman Bharat.

Citi Grid Gas Pipeline Network are Lifeline for Industry & Domestic



Natural gas is primarily transported overland through extensive pipeline networks. Alternative transportation methods, such as truck tankers, trains, or marine vessels/barges, are both costly and hazardous. Pipelines are typically constructed from carbon steel, extending from oil and gas terminals to distribution lines that deliver gas to customers. Smaller lines branching off the main or transmission pipelines connect directly to consumers. Since the early 1980s, flexible plastic pipes have been introduced for these smaller lines, offering easier installation and enhanced corrosion resistance..

If we look back to the history, Bombay Gas Company formed in 1862 set up gas works in Parel, 1866, that is more than 100 years ago. The gas used for lighting the streets and domestic cooking purposed through pipeline network.

India's fast industrialization in better economic condition, the demand for the natural gas supply has been increasing across the country. The number of Indian government organizations with collaboration from International organization set up for the distribution of natural gas to the industry and domestic use such as GAIL, MGL, VGL, IGL and private sector like Adani and Reliance. These gas companies here to build their infrastructure by laying, building, construction and distribution of the natural gas. The Government of India set up the gas authority Petroleum and Natural Gas Regulatory Board (PNGRB) to accord license, control, monitor and supervise the Government & Private Gas companies for the safe and environment friendly gas supply system. The ONGC and other Oil & Gas organization were responsible were had the authority before set up on PNGRB.

Today India has almost more than 35,000 kilometers of gas pipeline network in India. All the metro cities as well other cities have Citi Grid Gas supply system owned by government and private players.

To design, construct installation and testing and commissioning including its operation and in service inspection is a challenge for the operator especially in metro cities like Mumbai. As such many organizations are involved to ensure at most safety. Pipeline is connected to the Oil & Gas terminal and distribution by rigid carbon steel pipelines network which is further connected to domestic line using GI pipe, copper and/or plastic pipes. There are number of isolation valves, pressure reduction valves and metering and isolation valves. Since all rigid carbon steel pipelines are underground; an electric cathodic protection system along with corrosion resistance coating provided to prevent corrosion of the underground pipelines.

All above installation of Citi Grid Gas pipelines are certified by PNGRB approved certification bodies to ensure quality and safety of the gas pipeline.

We at International Certification Services provider of the 'Total Quality Management' under single umbrella to cover all the activities right from design to commissioning including in service inspection. ICS is an accredited certification body in compliance with ISO 17020 Inspection Services Management System.





Mr. Surendra Singh

Enhancing The Work Environment

Dy. General Manager - Certification

QA/QC , Inspection & Verification of City Grid Gas Pipeline Network

The Medium Density Polyethylene (MDPE) network comprises various sizes and thicknesses of MDPE pipes, along with associated accessories and fittings such as couplers, saddles, and transition fittings (T/F).

The MDPE network begins at the transition fitting near the downstream valve of the District Pressure Regulating System (DPRS) and terminates at the transition fitting near the consumer premises, where it connects to a Galvanized Iron (GI) pipe.

The MDPE network typically operates at 4.0 bar pressure in the main ring and 100 mbar after the service regulator in the sub-network.

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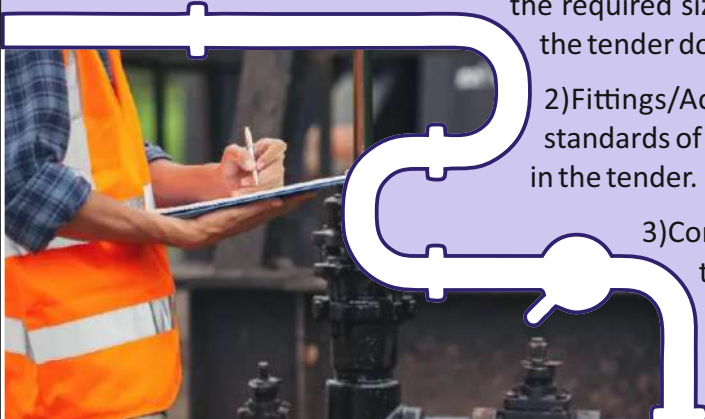
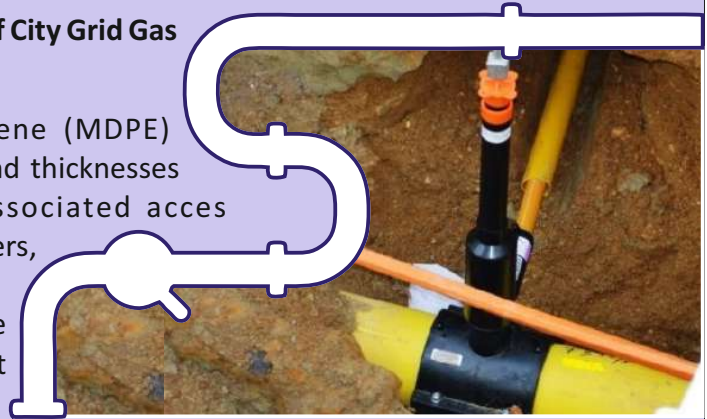
Inspection Requirements:

A) HSE Requirements

1. Work Permit Verification: Ensure that the contractor has a valid work permit issued by the CGD entity, PMC, or any other nominated agency.
2. Adherence to Personal Protective Equipment (PPE): Confirm that all personnel working on-site are wearing the required personal protective equipment (PPE) as per safety guidelines.
3. Toolbox Talk: Ensure that a toolbox talk has been conducted to discuss the safety protocols and hazards related to the work.
4. Availability of Approved Caution/Warning Safety Boards and Barricading Tape: Ensure the presence of adequate and approved caution/warning safety boards and barricading tape for securing hazardous areas.
5. Risk Management/Job Safety Analysis: Conduct a thorough risk assessment and job safety analysis (JSA) to identify and mitigate potential hazards associated with the work.
6. Safety Training Requirements and Execution: Verify that all personnel have received the necessary safety training, and ensure that the training is executed effectively to meet safety standards.

B) Quality and Quantity Requirements

- 1) MDPE Pipe Size, Grade, and Standard Dimension Ratio (SDR): Ensure that the MDPE pipes used in the network meet the required size, grade, and Standard Dimension Ratio (SDR) as specified in the tender documents.
- 2) Fittings/Accessories Size and Standards: Ensure that the sizes and standards of fittings and accessories comply with the specifications outlined in the tender.
- 3) Condition of MDPE Pipes and Fittings Upon Receipt at Site: Inspect the condition of MDPE pipes and fittings upon arrival at the site to ensure they are undamaged and meet quality standards.



4)Storage of MDPE Pipes and Fittings at Site: Verify that MDPE pipes and fittings are stored at the site in accordance with the tender specifications to prevent damage and ensure proper handling.

5)Approved QAP (Quality Assurance Plan) and Work SOP for MDPE Laying: Ensure that the work follows the approved Quality Assurance Plan (QAP) and Standard Operating Procedures (SOP) for laying MDPE pipes.

6)Approved QAP for MDPE Fittings and Warning Mats: Verify that the QAP for MDPE fittings and warning mats is approved and adhered to during installation.

7)Approved Electrofusion Procedure: Ensure that the electrofusion procedure being used is approved and complies with relevant standards.

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8)Approved WQT (Welder Qualification Test) for MDPE Technicians/Welders: Verify that MDPE technicians/welders have successfully completed the required Welder Qualification Tests (WQT) and are qualified to perform the work.

9)Location of Underground Utilities: Confirm that the location of existing underground utilities is clearly identified and marked before any excavation or installation work begins.

10)Trench/Pit Width and Depth as per Tender Requirements: Ensure that the trench and pit dimensions (width and depth) are in accordance with the specifications outlined in the tender.

11)Minimum Top Cover as per Tender Requirement: Verify that the minimum top cover for the MDPE pipes, as specified in the tender, is maintained during installation.

12)Lowering of MDPE Pipe as per Approved Procedures: Ensure that MDPE pipes are lowered into the trench following the approved procedures to prevent damage and ensure proper alignment.

13)Electrofusion Machine Operator Certification/Approval: Ensure that the electrofusion machine operator is certified and approved to operate the equipment in accordance with the required standards.

14)Calibration of Instruments and Electrofusion Machine: Verify that all instruments and the electrofusion machine are properly calibrated before use to ensure accurate results.

15)Fusion Process Parameter Verification/Barcode Verification: Confirm that the fusion process parameters are properly verified, and ensure that barcode verification is performed to ensure correct fusion.

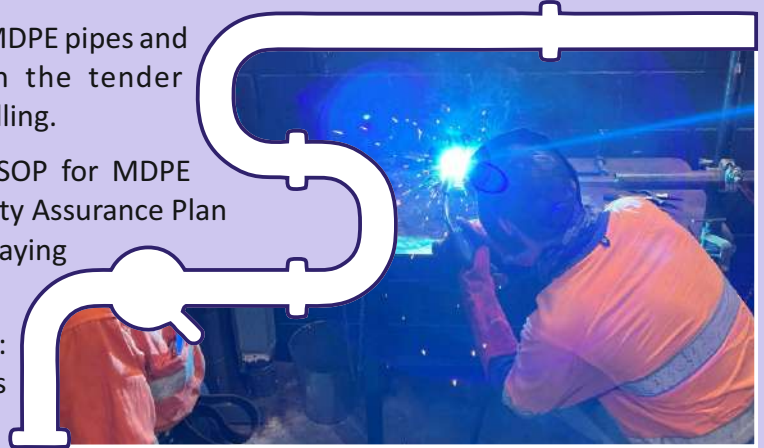
16)Measurement of Trench/Pit/Moling for Cross-Verification of Agency's Bill: Measure the dimensions of the trench, pit, or moling to cross-check with the agency's bill and ensure accuracy in the billing process.

17)Backfilling as per Tender Requirement: Ensure that backfilling is carried out according to the specifications outlined in the tender to ensure the integrity and safety of the installation.

18)Transition Fitting (T/F) Installation After Customer Consent: Confirm that transition fittings are installed only after obtaining customer consent, ensuring compliance with all necessary approvals.

19)Installation of Valve Chambers and Markers as per Tender Requirement: Verify that the installation of valve chambers and markers is performed in compliance with the specifications outlined in the tender.

20)Flushing of MDPE Network: Ensure that the MDPE network is properly flushed to remove any debris or contaminants before it becomes operational.



21) Pressure and Time Verification in Pressure Testing as per Tender Requirement: Verify that the pressure and testing duration during pressure testing adhere to the specifications set forth in the tender.

22) Nitrogen Purging as per Tender Requirement: Ensure that nitrogen purging is carried out in accordance with the specifications outlined in the tender to ensure the integrity of the system.

23) As-Built Drawing Certification: Verify that the as-built drawings are certified, reflecting the final installation and configuration of the MDPE network.

24) Gas Commissioning as per Approved Procedure: Ensure that the gas commissioning process follows the approved procedures to guarantee safe and proper operation of the system.

C) Documents/Record Requirements

1. Various Statutory Approvals/NOCs: Ensure that all necessary statutory approvals and No Objection Certificates (NOCs) from authorities such as PWD, MC, RWA, NHAI, and Railway are obtained and verified.

2. Verification of Agency's Quality Records: Verify the agency's quality records to ensure compliance with the specifications and standards outlined in the tender.

3. Verification of Agency's Quantity Records/Bills/RA Bills/DPR/MPR: Cross-check the agency's quantity records, bills, RA bills, Daily Progress Reports (DPR), and Monthly Progress Reports (MPR) to ensure they align with the tender requirements and actual work done.

D) Reference Standards

- ASME B31.8
- T4S
- IS 14885
- ISO 4437

Competency of Surveyor/Inspector



The inspection and certification process of CGD (City Gas Distribution) networks is crucial to ensure the establishment of a safe and secure system in any geographical area. This inspection process starts with the verification of various statutory clearances and approvals from the concerned authorities and continues until the commissioning of the CGD network. It also includes operational and maintenance activities during the operation of the network. Since surveyors/inspectors perform these activities, their competency is a critical factor in ensuring the quality and safety of the CGD network.

Competency Criteria

Although the regulatory body, PNGRB, does not specify a detailed competency framework, the certification and inspection agencies, as well as CGD entities, set their own competency criteria to ensure high-quality work in the CGD network. These criteria may vary depending on the specific tasks involved in the CGD project. For instance, if the work involves steel pipelines and requires a radiography review, the surveyor/inspector must hold at least an NDT Level-II certification in Radiography Testing as per ASNT/ISNT standards.

Regarding educational qualifications, a surveyor/inspector is generally required to have a Diploma or Bachelor's degree in the relevant engineering field, along with appropriate experience, depending on the nature of the work. These competency criteria can be established by the CGD entity, the inspection/certification agency, or both, depending on the specific requirements of the project.

Conclusion on Competency Requirements for CGD Work

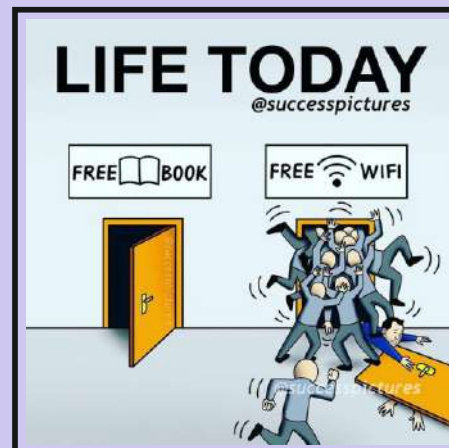
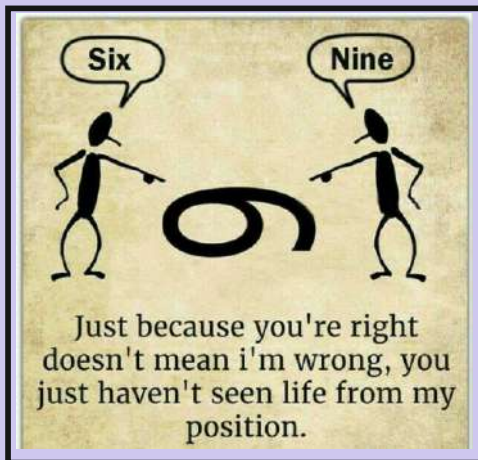
A CGD Surveyor/Inspector must possess the following qualifications and competencies to ensure the effective and safe execution of CGD work:

1. Educational Qualification: A relevant educational background, typically a Diploma or Bachelor's degree in Engineering, is essential.
2. Relevant Work Experience: Adequate industry experience, with a focus on CGD systems and processes, is necessary to ensure practical knowledge and expertise.
3. Awareness of Essential Instruments: The surveyor/inspector must have a thorough understanding of essential instruments, including their working principles, least count, suitability, fitness, and calibration requirements.
4. Knowledge of Industry Standards: A solid understanding of various standards related to CGD work, such as ASME, ASTM, IS, API, T4S, ERDMP, and PIMS, is crucial for compliance and quality assurance.
5. Proficiency in Document/Report Verification: The ability to effectively verify contractor documents and reports to ensure accuracy and adherence to regulations.
6. Familiarization with the CGD Area: Familiarity with the CGD area, including its layout, infrastructure, and operational challenges, is important for effective inspection and certification.
7. Impartiality, Confidentiality, and Honesty: The surveyor/inspector must demonstrate high ethical standards, including impartiality in decision-making, confidentiality in handling sensitive information, and honesty in reporting and assessments.

Up Coming Training Calendar- Feb - 2025

Training Name	Date	Time	Fees	Trainer	Mode
Lead auditor training for ISO 9001:2015	3rd to 7th feb 2025	10.00 am to 5.00pm	16000+18%GST	murlidhar vaity	Online
Internal auditor training for ISO 13485 :2016	10th and 11th feb 2025	10.00 am to 5.00pm	8000+18%GST	supriya patel	Online
Lead auditor training for ISO 13485:2016	17th to 21th feb 2025	10.00 am to 5.00pm	17000+18%GST	supriya patel	Online
Internal auditor training for Iso 27001: 2022	24th and 25th feb 2025	10.00 am to 5.00pm	8000+18%GST	murlidhar vaity	Online

Motivational Quotes





Up Coming Feb Month Birthday's- 2025



Sr. No.	Emp. Name	Station	Emp. Dob
1	Ankit Yadav	ICS-Reliance Ro Project	01-Feb
2	Sunil Kumar	ECD-ADANI GJ	01-Feb
3	Shraddha Chavan	Mumbai-HR	02-Feb
4	Chandan Kumar	ICS-ONGC-Bokaro	02-Feb
5	Khatalsab Sanadi	ICS-Reliance Ro Project	02-Feb
6	Mayur Parmar	ICS-ONGC-WADU	02-Feb
7	Mustafa Alam	ICS-MGL Steel	02-Feb
8	Nirav Rathod	Mumbai-Admin	03-Feb
9	Izhan Shaikh	Mumbai-Marketing	03-Feb
10	Manoj Kumar Pal	ICS-Assure - Health	03-Feb
11	Chandra Bhushan Kumar	ICS-Reliance Ro Project	04-Feb
12	Aakif Zhari	ICS-Assure - Property	04-Feb
13	Anand Pal Singh	New Delhi	05-Feb
14	Faizan E Anwar	ICS-ONGC-Bokaro	05-Feb
15	Shubham Choudhary	ECD- HPCL-RBPL	06-Feb
16	Mohit Kumar Omprakash	ICS-IGL New Delhi	06-Feb
17	Batchala Vinod	ICS-IGL New Delhi	06-Feb
18	Ujjal Saha	ICS-Reliance Ro Project	06-Feb
19	Malavika	ICS-Assure - Reconstruction	07-Feb
20	Manoj Kumar Pal	ICS-VENDOR	07-Feb
21	Rahul Mehra	ECD-GAIL-HVJ-SURVEY	08-Feb
22	Panneer Selvam	ICS-VENDOR	09-Feb
23	Mohammad Rahmat	ICS-IOCL Mathura Shutdown	10-Feb
24	Abhishek Kumar Singh	ICS-VENDOR	10-Feb
25	Devendra Sen	ICS-Reliance Ro Project	10-Feb
26	Mohammadsufiyan Dabhoiwala	ICS-ONGC-Ankleshwar	10-Feb
27	Satish .	Training centre	10-Feb
28	Sushma Kindalkar	Mumbai-Technology	11-Feb
29	KUNAPAREDDY KUMARASWAMY	ICS-ONGC-Cauvery Asset	12-Feb
30	David Sangma	Training centre	12-Feb



Up Coming Feb Month Birthday's- 2025



Sr. No.	Emp. Name	Station	Emp. Dob
31	Mahtab Alam .	ICS-IOCL Mathura Shutdown	12-Feb
32	Raj Kumar .	Training centre	12-Feb
33	Shashank Sekhar Dash	ECD-IOCL	12-Feb
34	Md Arman	ICS-ONGC-MUMBAI-CIVIL RO	12-Feb
35	Pranali Jadhav	Mumbai-TPA	14-Feb
36	Nunna Pavan Kalyan	ICS-IOCL RO South	14-Feb
37	Rohit Bhardwaj	ECD-BPCL BINA & KOTA	14-Feb
38	Govind Kumar .	ICS-IOCL Mathura Shutdown	15-Feb
39	Baijnath Thakur .	ECD-Gail Survey	15-Feb
40	MD Abutalib Ansari	ICS-IOCL RO South	15-Feb
41	Md Raja	ICS-IOCL Mathura Shutdown	16-Feb
42	Alpeshkumar Pratapji Purohit	ICS-ONGC-WADU	16-Feb
43	Md Alamgir Hossain	ICS-ONGC Tripura	17-Feb
44	Zala Jaydipsinh	ICS-ONGC-Mehsana	17-Feb
45	Pritam Mule	ICS-MNGL-Pune	18-Feb
46	Shubham Shukla	ICS-ONGC-Delhi	18-Feb
47	Sagar Dhande	ICS-Assure - Property	18-Feb
48	Mukesh Kumar	ICS-ONGC South Goa	18-Feb
49	Rahul Gupta	Mumbai-ECD	20-Feb
50	Md Jahid Rashool .	ICS-IOCL Mathura Shutdown	20-Feb
51	Pratik Thakre	ICS-ONGC-MUMBAI-CIVIL RO	20-Feb
52	Sushil Kumar Sah	ICS-MNGL-Pune	20-Feb
53	Uttam Kumar Yadav	ICS-IOCL Mathura Shutdown	21-Feb
54	Chirag Kirtibhai Patel	ICS-ONGC-Mehsana	20-Feb
55	Dhirendra Kumar Dhiraj	ICS-IGL New Delhi	21-Feb
56	Swati Vasave	Nasik-ICST	23-Feb
57	Aamir Ahmad	ICS-IGL New Delhi	24-Feb
58	Muralidhar m Vaity	Mumbai-CO	25-Feb
59	Punya Sai Ganesh	ICS-IOCL RO South	25-Feb
60	Devidayal .	ICS-IOCL Mathura Shutdown	25-Feb
61	Ajay Yewale	ICS-MNGL-Pune	28-Feb
62	Pravin Badhe	ICS-MNGL-Pune	29-Feb

Horoscope Month of February - 2025



Aries

This month, your desire to achieve more will dictate your actions. Job prospects are apparent. Candidates may get what they deserve by actively searching for a job. In love, be straightforward. Finding a partner at a corporate function is possible, and those committed will feel accomplished as a team. In the home environment, your family will see you as an inspiration. Consider enrolling in short courses that develop leadership skills or increase knowledge of management areas.



Taurus

January is associated with whispers of adventure and new horizons, Taurus. Your curiosity will guide you into travelling. When it comes to career growth, it is the name of the game—go for positions in other cities or for jobs that challenge you. Up skilling could bring about progress for the employed. Love becomes philosophical. Single people will get acquainted with someone with similar thoughts if learning law, languages or spiritual subjects will be in tune with their energy this month.



Gemini

Change is your theme for the month of January. The month pushes you to think about personal development. In the workplace, there will be concealed possibilities—be observant of invitations or unappreciated tasks. Close networking will be advantageous to job seekers. In love, emotions run deeper. Family interactions can be about money or business collaboration. Education-wise, research-intensive fields, psychology, and occult studies are compatible with your energy.



Cancer

Love takes centre stage this month. Regardless of their nature, relationships change and become closer. This month, career collaborations pay off, and those seeking employment may be placed through acquaintances. Employees might get recognition through teamwork. Cohabiting couples can achieve deeper connections, while singles will meet interesting people. There could be some important conversations with parents or siblings. For students, the study of public relations, counselling, or law will yield positive results.



Leo

January helps you to pay attention to details, Leo. This month brings order to your life and allows you to complete tasks that were left unresolved and set new goals. On the job, your commitment will not be taken for granted. Candidates may get employment in the health, service, or administration sectors. In the case of those already working, organisation and consistency will lead to positive feedback. In love, be patient—singles can meet a partner at work, while couples can be happy in achieving each other's dreams



Virgo

January brings creative and joyful energy to you, Virgo. This is your opportunity to come out of your shell and be creative. Career opportunities match passion—job seekers may get jobs that involve design or media; while working, Virgos enjoy managing new projects. Romance feels playful. People may find a partner through activities they engage in or events they attend, and couples can work on projects together. If you are studying, areas such as literature and drama will resonate with your energy.

Horoscope Month of February - 2025



Libra

January is associated with home and comfort, Libra. You will feel the desire to warm up the environment and bring some stability into your life. The advancement in the career may not be sharp; however, when working in a serene environment, efficiency will be the order of the day. Candidates may search for the positions through friends and relatives. Family occasions will be significant in relationships. For students, history, architecture or interior design keeps you grounded.



Scorpio

This month boosts your communication energy. Career advancement can be achieved through networking, writing or speaking in public. Applicants will get a chance to take short-term courses. In love, meaningful conversation can cause sparks. Important discussions could take place with your siblings. Business travels will keep you busy. This month, subjects like mass communication, advertising, or languages will interest you.



Sagittarius

January is about financial growth, Sagittarius. A desire for stability will characterise the beginning of the year. In terms of career, slow and steady will win the race; thus, job seekers should look at prospects with long-term impact. For those employed, focus on the possibility of getting a financial bonus or any new source of income. Singles might be attracted to someone with stable vibrations, while couples might talk about money matters. Enhance your financial management skills this month.



Capricorn

It's your time to shine this month, Capricorn. The feeling of rejuvenation is evident; now is the time to move positively. The career aspect links up with the personal aspect. Thus, this is the right time to stand up for yourself in new projects or leadership positions. Singles might get attention, while couples will feel more connected because of shared purpose. Students will perform well in subjects relating to business or management programs.



Aquarius

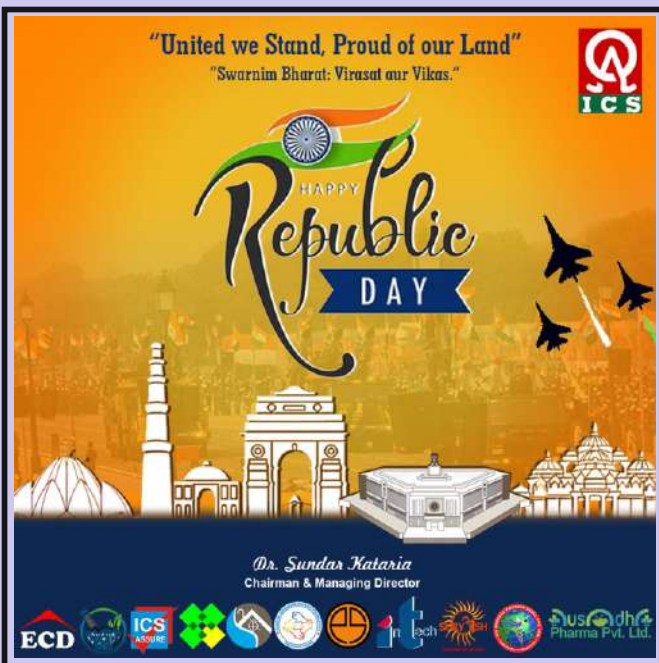
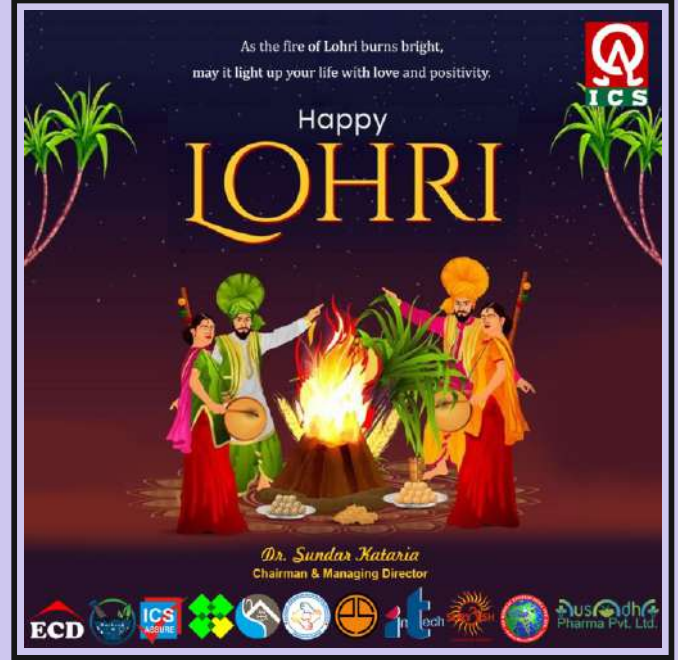
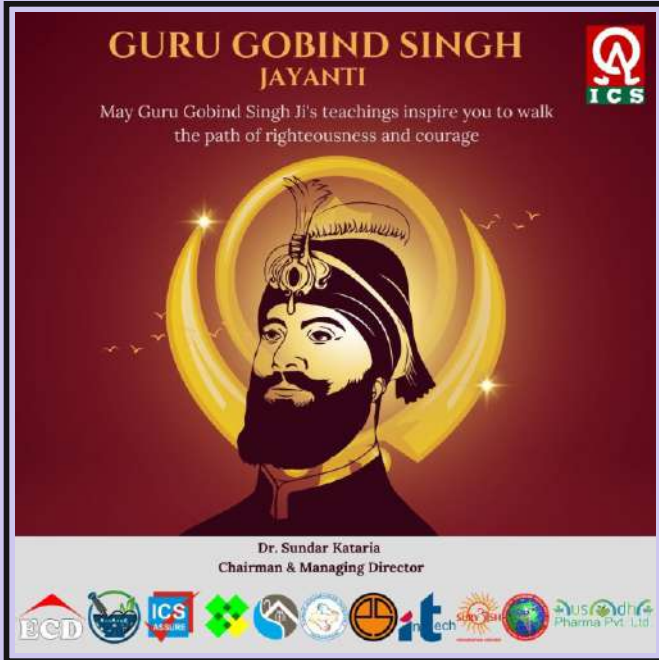
January is the time of introspection, Aquarius. This is a month for reflection and taking a step back to focus on your goals. Career advancement happens quietly – one must pay attention to the work being done and preparation being made. Candidates may find spiritual or creative positions suitable for them. In love, the depth of feelings will enhance the relationship. Single people can find relationships through self-reflection. Elders of the family may require your company and attention.



Pisces

Your social life comes into full bloom this January, Pisces. This is the best time to make friends and build a network. Career advancement is best done through teamwork. In love, friendships are important. Singles could meet someone through friends, while couples could enjoy what the community offers. Social functions are at the core of family relationships this month. Learning about technologies or media will help create more extensive networks and opportunities.

ICS Festival Greeting



MRM- 2024- 2025



Technology Training for Suryaansh



सुर्यांश

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At Suryaansh, we believe that every journey deserves a touch of luxury, every stay should be unforgettable, and every traveller deserves seamless experiences. We are your premier destination for hotel bookings, committed to transforming your travel dreams into reality. Established with a passion for hospitality and a commitment to excellence, Suryaansh is a leading name in the travel industry, with a team of dedicated professionals deeply passionate about curating exceptional travel experiences.



Vision:

"Our vision at Suryaansh is to be Your Gateway to Memorable Stays", where every journey is imbued with luxury, every stay is etched into memory, and every traveller experience seamless excellence. As your premier destination for hotel bookings, we are committed to transforming your travel dreams into reality. At Suryaansh Training & Convention Centre, we extend this vision to become the ultimate destination for events, training programs, and leisure getaways, setting new standards of excellence in hospitality and service."

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