

INDUSTRIAL SAFETY NEWS

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NSCI'S 60TH ANNIVERSARY FUNCTION (4th March 2026, NSCI Hqs, CBD Belapur)



National Safety Council of India (NSCI) celebrated its 60th anniversary function on 4th March 2026 at Hqs. building at CBD Belapur, Navi Mumbai. Safety pledge administered to all NSC officials.

Dr. Arvind Bodhankar, Vice Chairman (E), NSC was invited as a Chief Guest for the function. Dr. Bodhankar addressed the gathering. He stressed upon the management of data, importance of Artificial Intelligence and Machine Learning in workers safety. These technologies will enhance occupational safety by monitoring environmental conditions and analyzing data to prevent workplace accidents.

Other former NSCI officials were also invited to attend and grace the occasion.

Dr. Lalit Gabhane, DG, NSC apprised the gatherings of NSCI's milestones during the last 60 years.



Dr. Arvind Bodhankar (Chief Guest), Vice Chairman (E), NSC addressing the gathering. Seated from L: A.Y. Sundkar, Director; Dr. Lalit Gabhane, Director General and R.R. Deoghare, Director, NSC



Welcome address given by Shri A.Y. Sundkar, Director, NSC and vote of thanks were proposed by Shri R. R. Deoghare, Director, NSC.

A group photo on the occasion

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NSCI signs MoUs with World Trade Centre and All-India Association of Industries

(10th April 2026, Mumbai)

The National Safety Council of India (NSCI) is pleased to announce that on 10th April 2026, two Memoranda of Understanding (MoUs) were signed at the World Trade Centre (WTC), Mumbai, marking a significant milestone in strengthening collaboration in the areas of industrial safety, policy engagement, and institutional development.

The first MoU was signed between NSCI and the All-India Association of Industries (AIAI), and was executed by Dr. Lalit R. Gabhane, Director General, NSCI, and Dr. Vijay Kalantri, President, AIAI and Chairman, MVIRDC, World Trade Centre, Mumbai.

The second MoU was signed between NSCI and MVIRDC, World Trade Centre, Mumbai, and was formally executed by Dr. Lalit R. Gabhane, Director General, NSCI, and Ms. Priya Pansare, Director, World Trade Centre, Mumbai.

These collaborations bring together esteemed institutions and association with a shared vision of fostering a safe, resilient, and forward-looking ecosystem that supports sustainable growth and responsible industrial development and workplace safety.

Through these collaborations, NSCI, WTC Mumbai, and AIAI aim to:

- ❖ Promote a culture of safety and prevention across institutions/association and member industries.



Seen from left while signing MoU: Dr. Lalit R. Gabhane, DG, NSCI and Dr. Vijay Kalantri President, AIAI and Chairman, MVIRC, WTC, Mumbai

- ❖ Facilitate knowledge exchange and policy dialogue on emerging safety and risk management challenges.
- ❖ Support capacity building and to foster safety culture in industries in alignment with national and global best practices of industrial safety.

NSCI looks forward to actively engaging with stakeholders from the member industries of both associations and to translating this shared vision into meaningful and impactful outcomes, thereby enhancing the overall safety culture across industries.



A Group photo with officials of NSCI and WTC



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KEY FEATURES



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Anti-fog



High Impact
Protection



UV
Protection



Lightweight



Corrosion
Resistant



Ignition
Resistant

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All India Radio (AIR) Marathi 558 MW in Mumbai Broadcast's Special Programme on 55th National Safety Day (4th March 2026, Mumbai)

All India Radio, Asmita Channel (AIR Marathi) has interviewed NSC officer in a programme titled **"Balsagar Bharat Hovo"** on the occasion of 55th National Safety Day Campaign and telecast on 4th March 2026 between 6:30 pm and re-telecast on 5th March 2026 at 5:40 pm.

On behalf of National Safety Council, Shri A. Y Sundkar, Director participated in the programme. The programme was produced by Mr. Roshan Jadhav, Programme Officer, Akashvani, Mumbai and interviewed by RJ Rashmi Mhambrey. The interview was focused on the importance of the Campaign, its origin, theme, etc. Several other issues related to industrial safety, road safety, construction safety, etc. were discussed in the interview.



Seen from L: A. Y. Sundkar, Director, NSC and RJ Rashmi Mhambrey while interviewing

NSCI's Officer Felicitation at Narayan Meghaji Lokhande OSH Award 2026 (9th April 2026, Mumbai)



From L: S. N. Dhamone, Dy. Director, NSC felicitated by Adv. Akash Fundkar, Hon'ble Labour Minister, Govt. of Maharashtra

Shri Sandeep N. Dhamone, Deputy Director, NSC was felicitated by Adv. Akash Fundkar, Hon'ble Labour Minister, Government of Maharashtra, on 11th April 2026 at Jio World Convention Centre, BKC, Mumbai, in recognition of his contribution as a member of the Awards Committee for finalizing the Safety Awards under the Narayan Meghaji Lokhande Occupational Safety and Health Award 2026, organized by the Directorate of Industrial Safety and Health, Government of Maharashtra.

NATIONAL SAFETY COUNCIL
(Autonomous Society setup by the Ministry of Labour, Govt. of India)

Sixty years of dedicated services to the industry

For details contact :

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Plot 98-A, Institutional Area, Sector - 15, CBD Belapur, Navi Mumbai - 400 614.
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Kappler and Lakeland join forces in India to expand high-level hazmat protection

Kappler and Lakeland, two leading protective clothing companies that compete in the U.S., have joined forces to expand chemical worker protection in India. The strategy will combine Kappler's advanced suit technology with Lakeland's position as an established PPE supplier in India. The companies specialize in different sectors of the protective apparel business. Lakeland focuses on coveralls and other apparel for non-life-threatening hazards, while Kappler is the long-time leader in total-encapsulating hazmat suits for fire brigades and other emergency response units.

The unique channel partner strategy will leverage Lakeland's position as an established supplier in India.

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Applications Invited



NATIONAL SAFETY COUNCIL OF INDIA

NSCI Safety Awards 2026



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To recognize and reward the organisations for their exemplary Occupational Health & Safety (OHS) performance and commitment to reduce workplace injuries, implementations of the best OHS practices & encourage continual improvements.

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Last date
30th June,
2026

CONSULTANCY SERVICES

NSC is engaged in a variety of consultancy services, including Conducting Safety Audits, Fire & Electrical Safety Audits, Construction Safety Audits, NSCI Safety Ratings, developing Onsite Emergency Plans, organizing Emergency Mock Drills, etc.



Conducted 1st Field visit for NSCI Five Golden Stars Rating (NSRS) for **M/s Bennet, Coleman & Company Ltd., Times of India Press, Sahibabad, Ghaziabad, UP** from 21-24 April 2026.

Akshay V. Hotkar (11th from right), Deputy Director, NSC to his left Amol A. Nikam, Assistant Director along with officials of BCCL, TOI press.



Conducted 1st Field visit for NSCI Five Golden Stars Rating (NSRS) for **M/s Afcons Infrastructure Ltd. (AIL), Tuna Tekra, Gujarat, Marine construction Project** from 24-27 March 2026.

Akshay V. Hotkar (4th from right), Deputy Director, NSC to his right Shubham R. Kochale, Technical Officer along with other officials of AIL

NSCI Training Calendar for the period May to July 2026

Sr No	Programme Title	Dates	Duration	Mode of Delivery/ Venue
1	Understanding and Implementation of The OSHWC Code, 2020	14 - 15 May 2026	2 days	NSC Hqs.
2	Safety in Scaffolding and Working at Height	21 - 22 May 2026	2 days	Bengaluru
3	Safety Culture and Behavior Based Safety Management – An Overview	2 June 2026	4 hrs	Virtual
4	NSCI Certified Lifting & Rigging Supervisor	8 - 10 June 2026	3 days	NSC Hqs.
5	Hazardous Waste Management & Environment Protection	15 - 16 June 2026	2 days	NSC Hqs.
6	Permit to Work: Practical Skills & Applications	22 - 23 June 2026	2 days	NSC Hqs.
7	Safety in Gas Cylinders	7 July 2026	4 hrs	Virtual
8	NSCI Certified Internal SHE Auditor Course	8 - 10 July 2026	3 days	NSC Hqs.
9	Occupational Health & Hygiene at Workplace	16 -17 July 2026	2 days	NSC Hqs.

For more details visit: <https://nsc.org.in/> or write to us on trainingnational@nsc.org.in



NATIONAL SAFETY COUNCIL OF INDIA



Exam Pattern

- Mode: **Online Examination**
- Total Questions: **120** Multiple Choice Questions (MCQs)
- Language: English • Duration: **2 Hours**

Email : nsat@nsc.org.in

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CATEGORIES

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For Technical Executives / Engineers/Safety Officers in Oil & Gas Sector

NSAT CONSTRUCTION

For Technical Executives / Engineers/Safety Officers in Construction Sector



INTERNATIONAL WOMEN'S DAY
8TH MARCH 2026



NATIONAL SAFETY COUNCIL OF INDIA

Launching

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EXCELLENCE AWARD

for

Women in Safety



- ✓ Women driving force in India's economic growth, contributing across industries, shaping a safer and stronger nation.
- ✓ In the Safety, Health & Environment (SHE) profession, women leaders impact is powerful and inspiring.
- ✓ NSCI launches Excellence Award for Women in Safety to recognise their contribution.

Apply before 30th June, 2026

Details log on : <https://nsc.org.in>

TRAINING PROGRAMMES

Building Safety Culture through Behaviour-Based Management Strategies (9-10 March 2026, Mumbai)

The program focused on strengthening workplace safety by integrating behaviour-based management approaches, encouraging proactive safety practices, and fostering a strong safety culture within organizations. Participants from various industries actively engaged in discussions, case studies, and practical insights on implementing behavioural safety strategies to improve workplace safety performance.



Bhagwan Bhosale (seated 6th from left), Director, NSC to his left Pratik Kathole, Technical Officer, NSC along with all participants

NSCI Internal Auditor Course on SHE Statutory Compliance (16-18th March 2026, Hotel West End, Mumbai)

The comprehensive training program covered various important aspects of Safety, Health, and Environment (SHE) compliance. Key topics included legal requirements, IS 14489:2018 guidelines, and methodologies for conducting internal safety audits. The course was designed with a strong practical approach, incorporating hands-on exercises, case studies, and assessments to enhance participants' understanding and auditing skills.



Bhagwan Bhosale (6th from right), Director, NSC; Vikas More (in black jacket), Sr. Asst. Director to his right Pratik Kathole, Technical Officer, NSC along with other participants

Overall, the program provided valuable insights and practical knowledge, enabling participants to effectively implement and audit SHE statutory compliance within their organizations.

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MEMBERS ACTIVITY

National Safety Day/Month-2026 Celebration



◀ **Tube Investments of India Ltd.**
Safety flag hoisted



▲ **Liberty Oil Mills, Shahapur, Maharashtra**
A view of PPE exhibition



▲ **Shyam Steel Manufacturing Ltd., Bankura, W.B.**
Children participated in the drawing competition



◀ **Nirma Ltd., Bhavnagar, Gujarat**
Safety skit performed during the NSD celebration



◀ **Nirma Ltd., Alindra, Gujarat**
I M Vohra, Dy. DISH, Vadodara inaugurated Safety Exhibition



▲ **Johnson Controls Automotive Ltd., Pune**
Firefighting mock drills conducted

▶ **Jindal (India) Ltd., Howrah, W.B.**
Group photo during NSD celebration



◀ **West Coast Paper Mills Ltd., Dandeli, Dist. Uttara Kannada**
Safety flag being hoisted

Andhra Pradesh Power Generation Corporation Ltd., Ibrhimpatnam – Competitions were conducted nearby 14 village schools, safety banners and posters exhibited a prominent places, safety awareness programme and onsite emergency mock drill conducted.

Observance of Fire Service Week 2026



▲ **Nirma Ltd., Bhavnagar, Gujarat**
Fire fighting team conducted mock drill

The Explosives (Amendment) Rules, 2026

The Ministry of Commerce and Industry (MoC&I), on March 05, 2026, issued the Explosives (Amendment) Rules, 2026, to further amend the Explosives Rules, 2008. The following has been stated namely: -

In rule 83, sub-rule (4):

- ❖ for clause (a), the following clause have been substituted, "(a) be located on the ground floor of a single-storeyed building with independent or standalone activity, having an independent entrance and emergency exit opening directly to open space and having doors opening outwards;";
- ❖ after clause (f), the following clause has been inserted, namely: - "(g) have not less than two or more fire extinguishers of Dry Chemical Powder (DCP) type and Carbon dioxide (CO₂) type be placed at strategic points."

In rule 86, after sub-rule (3), the following sub-rules has been inserted, namely: -

- ❖ (4) Independent fireworks.- The independent fireworks shop shall maintain a minimum clearance of three meters to open sky from any adjacent structure or building.
- ❖ (5) Fireworks shop.- The fireworks shop shall maintain a minimum clear distance of fifty meters from educational institution, hospital, medical diagnostic centre and religious place.
- ❖ (6) Exceptions.- The provisions of sub-rules (4) and (5) shall not apply to existing fireworks shops covered under licensed FORM LE-5.
- ❖ (7) Safety requirements.- Subject to the provisions of rule 112, the existing fireworks shops shall comply with the following safety requirements, namely:-
 - i. the shop shall be equipped with two automatic fire detection and alarm system using conventional dual type detectors having combination of smoke and heat with an auto-dialler facility to alert the shop owner and to the nearest fire station, in the event of fire;
 - ii. the existing fireworks shop must install a standalone

automatic portable or gravity fed water sprinkler system for fire suppression, with minimum water storage capacity of 300 liters connected to a pump of minimum rating 2 Horsepower (HP);

- iii. an alternate power supply or battery backup shall be provided for the standalone systems and in the case of existing fixed hydrant system, one tapping or extension should be taken from such system;
- iv. the centralised large electric panel shall be protected by an automatic tubing system used with gas based clean agent, with a detection tube capable of fast sensing at 80-90 degree Celsius and instant activation;
- v. the walls, ceiling and doors of the shop shall be coated with fire-retardant paint or flameproofing material to achieve a fire rating of thirty minutes;
- vi. the shop must have concealed electrical wiring using spark-or-flame proof either fire survival cables or fire retardant low smoke type;
- vii. the fireworks shop shall undergo an electrical audit annually, to be conducted by a certified qualified person or electrical inspector recognised by the Energy or Electrical Department of the concerned State;
- viii. all the equipments referred to in clauses (i) to (vii) shall conform to the relevant standards of the Bureau of Indian Standard."

In rule 112, in sub-rule (3), after the second provision, the following provision has been inserted, namely:-

- ❖ "Provided also that the licencing authority, before renewing the licence, shall call upon the licence holder by notice in writing to furnish an undertaking for compliance of additional safety measures specified in sub-rule (7) of rule 86 and the licence holder shall furnish such undertaking within a three months of the date of receipt of the notice or as may be specified therein, whichever is earlier."

The amendment has come into force on 5th March, 2026 vide Notification No G.S.R. 154(E).

The Bio-Medical Waste Management (Amendment) Rules, 2026

The Ministry of Environment, Forest and Climate Change, on April 17, 2026, issued the Bio-Medical Waste Management (Amendment) Rules, 2026, to further amend the Bio-Medical Waste Management Rules, 2016. The following has been stated:

- ❖ In rule 11, in sub-rule (1), after the words "Departments of Health," the word "Ayush" has been inserted.
- ❖ In rule 12, in sub-rule (6), after the words "District Health Officer," the words "representative, as nominated by the State or Union Territory Department of Ayush," has been inserted.

The amendment has come into force on 17th April, 2026 vide Notification G.S.R. 293(E).

The Gas Cylinders (Amendment) Rules, 2026

The Ministry of Commerce and Industry (MoC&I), on April 27, 2026, issued Gas Cylinders (Amendment) Rules, 2026, to further amend the Gas Cylinders Rules, 2016. The following has been stated namely: -

- ❖ In rule 3, in sub-rule (5), after the words, "touching Indian port" the words, "or cylinders and valves imported by establishments of the Ministry of Defence, Department of Space and its Public Sector Undertakings for their own use" has been inserted.
- ❖ In rule 32, to sub-rule (1), the following proviso has been inserted, namely:- "Provided that the permission shall not be required in respect of,-
 - (a) empty cylinders without valves;
 - (b) valves and LPG regulators, imported from the foreign manufacturing plants approved by the Chief Controller and having valid import licence in Form-D."
- ❖ In rule 48, in sub-rule (3), in clause (b), after the words, "Liquified Petroleum Gas", the words, "or other flammable gases" has been inserted.

The amendment has come into force on 27th April, 2026 vide Notification G.S.R. 315(E).

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The advertisement features a central image of a worker in a white shirt and hard hat operating machinery. Surrounding this are several safety posters with text in Hindi and English. One poster says "पहले ज्ञान फिर कदम!" (Knowledge first, then step!). Another says "ALWAYS USE REQUIRED PERSONAL PROTECTIVE EQUIPMENT AT WORKPLACE". A third says "BUILD A SAFETY CULTURE FOR SUSTAINABLE SUPPLY CHAIN". The NSCI logo is at the bottom center.

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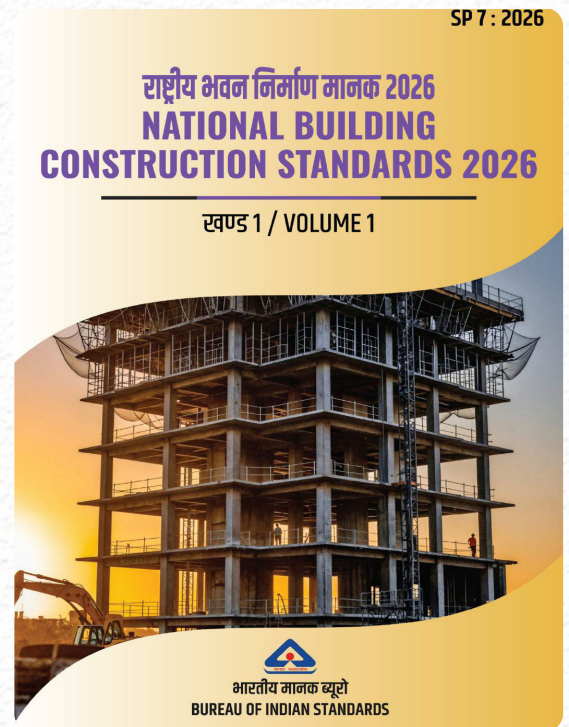


Regulatory Update: Transition from the National Building Code (NBC) to the National Building Construction Standards (NBCS)

The National Building Construction Standards (NBCS) 2026 (SP 7:2026), released on April 30, 2026, by the Bureau of Indian Standards (BIS), replaces the National Building Code (NBC) 2016 with a modernized, advisory framework. This move is aimed at simplifying compliance requirements while aligning with broader deregulation initiatives.

Unlike the earlier NBC, which was often perceived as quasi-mandatory due to the use of prescriptive language such as "shall," the NBCS adopts a more advisory approach by using the term "should." This shift repositions the standards as guiding principles rather than strictly enforceable provisions, thereby reducing legal ambiguity and potential litigation.

A key change pertains to applicability thresholds for fire and life safety provisions. Under NBC, such requirements applied to residential buildings above 15 metres in height. In NBCS, this threshold has been increased to 24 metres, effectively reducing the compliance burden for mid-rise structures. For more details, please visit <https://standards.bis.gov.in/>



Safety Aspects of Boilers

1.0 Introduction

A boiler is a pressure vessel designed to heat water and produce steam. The source of heat may vary and typically includes fossil fuels such as coal, oil, and natural gas; by-product fuels such as carbon monoxide from coke ovens; and biomass fuels such as bagasse, wood scraps, husk, and other agricultural residues. In nuclear power plants, boilers, commonly referred to as steam generators, utilize the heat generated from nuclear fission. In many industries, waste heat recovery systems are employed to preheat feed water and, in certain cases, to generate process steam. Additionally, electrically heated boilers are also used in a few operations across specific applications.

2.0 Boiler Safety

Historically, safety aspects of boilers have been associated with serious accidents, injuries, and property damage. To address these risks, professional organizations such as the American Society of Mechanical Engineers (ASME) have

established comprehensive standards and regulatory codes. The ASME Boiler and Pressure Vessel Code serves as a global benchmark, providing detailed rules and guidelines to ensure the safe design, construction, and operation of boilers as well as other pressure vessels. These codes are widely adopted internationally, with individual countries enforcing their own regulatory framework to ensure safe operations of boilers.

In India, boiler operations are governed by the Indian Boilers Act, 1923, which was most recently amended in 2025. The Act strictly regulates the design, construction, inspection, and operation of boilers. As per the 2025 amendment, a boiler is defined as a pressure vessel in which steam is generated for use external to itself by the application of heat, wholly or partly under pressure. A vessel qualifies as a boiler if it has a capacity of twenty-five litres or more (measured from the feed check valve to the main steam stop valve), or if it is designed to operate at a pressure of 1 kg/cm² or above, and in which water is heated to a temperature of not less than 100°C.

contd...

All boiler operations in India require an Operating License, issued annually by the respective State Boiler Inspectorate Department. Strict adherence to these regulatory provisions ensures the safe and reliable functioning of boilers across industries.

2.1 Boiler Mountings and Accessories

Safety of the boiler is ensured through essential mountings and accessories, which form a part of design safety. These mountings and accessories include:

- Pressuretrols
- Safety valves
- Water level indicators
- Bottom blow-down valves
- Continuous blow-down valve
- Trycock
- Flash tank
- Automatic blowdown/continuous heat recovery system
- Hand holes
- Low-water cutoff
- Surface blowdown line
- Circulating pump
- Feedwater check valve or clack valve
- Desuperheater tubes or bundles
- Chemical injection line
- Steam Accessories include the Steam traps and the Main steam stop/check valve
- Combustion accessories: Fuel oil system, fuel oil heaters, Gas system, Coal system
- Other items which are essential for boilers are Pressure gauges, Feed pumps, Fusible plug, Insulation and lagging, inspector's test pressure gauge attachment, Name plate, Registration plate, etc.

2.2 Flue Gas Dispersal and Ash Disposal

In addition to the operational control of boilers, safe management of by-products such as gaseous effluents and ash is critical to preventing

environmental degradation. Flue gases are extracted using induced draught systems created by mechanical equipment and expelled through forced or balanced draught arrangements, depending on system design.

To reduce emissions of sulphur dioxide (SO₂)—a major pollutant released during the combustion of high-sulphur coal—the Government of India has mandated the installation of Flue Gas Desulfurization (FGD) systems in thermal power plants. Implementation of FGD facilities was currently in progress wherever needed, with requirements varying according to plant classification. However, in a recent decision by the Government, the requirement of FGD facilities is stated to be withdrawn.

For ash management, Electrostatic Precipitators (ESPs) are commonly employed to capture particulate matter, such as fly ash, from flue gases before discharge into the atmosphere. In addition, bottom ash is collected directly from the furnace. The collected ash is either transported as slurry to designated ash ponds or repurposed for industrial applications such as cement production, brick manufacturing, and mines backfilling.



contd...

2.3 Safety During Erection

To ensure safe execution of erection activities, the following good practices must be strictly observed:

Lifting Plan & Work Permits:

Prior to girder jack-up and structural erection, the management team shall prepare a detailed Lifting Plan. All activities must be carried out under a valid Safety Work Permit (SWP) and preceded by a Pre-Job Briefing (PJB).

Welding Restrictions:

Welding during jack-up operations is strictly prohibited. Welding shall only be permitted after proper earthing checks and approval of welding equipment.

Certified Lifting Equipment:

All lifting equipment must have a valid certification under applicable statutes.

Use of Cranes:

Supporting cranes must be in good working condition and operated by certified personnel. Tandem lifting operations should be avoided; however, if used in exigencies, close monitoring and coordination between both operators is mandatory.

Weather Conditions:

Lifting operations shall not be carried out during adverse weather conditions.

Hydrostatic Testing:

Before hydrostatic testing, the specification sheet of equipment and pipelines (detailing pressure and temperature limits) must be available, and parameters optimized as per the document.

Housekeeping:

Strict housekeeping shall be maintained in and around the boiler area, especially on the boiler top, stairways, platforms, ground level, furnace, corner water walls, superheaters, reheaters, and economizers.

2.4 Safety Practices during Maintenance of Boiler

Boiler maintenance typically involves isolation of certain mountings and accessories, opening heated surfaces, descaling components, and removing hot coal clinkers, among other tasks. These operations carry a high risk of hazards and can potentially lead

to serious incidents if not managed properly. To mitigate such risks, it is essential to prepare and strictly follow Standard Maintenance Procedures (SMPs) during all maintenance activities. Adherence to these procedures not only helps prevent accidents but also reduces the Mean Time Between Repairs (MTTR), thereby improving the reliability and efficiency of boiler operations.

Equipment/Procedures having high hazard potentials during maintenance include:-

- Furnace
- Platen Super Heater (PSH)
- Reheater
- Screen Tubes
- Economizer
- Air Pre Heater (APH)
- Coal Mills
- Removal of clinker from the bottom of boilers

2.5. Safety practices during operation of the Boiler

Boiler operation and maintenance involve several potential hazards, such as abnormal firing and loading, accidental contact with heated surfaces, unintended steam releases, and even furnace explosions. To minimize the likelihood of such events, strict adherence to operational safety practices is essential. Key measures include:

Qualified Personnel:

Employ only licensed and certified boiler operators and engineers.

Operational Checklists:

Maintain detailed operational checklists and ensure records are verified during every shift.

Parameter Monitoring:

Continuously monitor critical parameters, including wind box-to-furnace differential pressure (DP), combustion efficiency, flame intensity, clinker grinder availability, soot blowing schedules, mill fineness, furnace temperature mapping, and oxygen grid measurements.

System Verification:

Regularly test safety systems such as trips, alarms, Human-Machine Interfaces (HMI), and operator response protocols. These checks should align

contd...

with findings from Hazard and Operability (HAZOP) studies conducted during commissioning. Any deviations in identified safety measures must be promptly documented and corrected.

Personal Protective Equipment (PPE):

Provide appropriate thermal wear and PPE to all operating staff.

Strict compliance with these practices not only ensures safe boiler operation but also enhances reliability and minimizes risks to personnel and equipment.

2.6. Safety Aspects during shutdown of the Boiler

Safety is as critical during the shutdown of a boiler as it is during operation. The following practices must be observed to ensure a safe and controlled shutdown process:

Work Permit System:

Follow a formal work permit system to safeguard both equipment and operating personnel.

Controlled Load Reduction:

Gradually reduce the boiler load and firing rate before initiating shutdown.

Blowdown Operations:

Perform blowdown to lower water levels and remove accumulated sediments.

Valve and Power Isolation:

Close all supply valves and disconnect electrical power sources.

Lockout/Tagout (LOTO):

Implement LOTO procedures, especially in multi-

boiler installations, to prevent accidental re-energization.

Natural Cooling:

Allow boilers to cool naturally to avoid thermal stresses caused by rapid temperature changes.

Ventilation:

Ensure proper ventilation to prevent the accumulation of hazardous gases or hot air.

Draining Protocol:

Drain the boiler only after adequate cooling to avoid sludge hardening on tube surfaces.

Emergency Preparedness:

Identify potential emergencies and maintain clear, accessible emergency shutdown procedures.

Personal Protective Equipment (PPE):

Provide and enforce the use of PPE such as safety glasses, gloves, and flame-resistant clothing.

Conclusion

Boiler safety must be ensured at every stage, from design and erection to operation, maintenance, and shutdown. Adherence to established safety measures not only minimizes risks and prevents accidents but also ensures reliable, efficient, and safe boiler performance throughout its lifecycle.

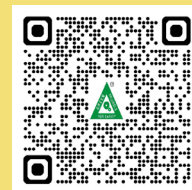
Reference:

- 1. Indian Boiler Act 1923 (Amendment 2025)
- 2. Safety guidelines by HSE department L&T MHPS boilers

(Source: Published in the NSCI's HSE Diary 2026 written by Shri Satish Bharambe, Ex Scientific Officer (H), BARC)

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SAFETY PUZZLE-32

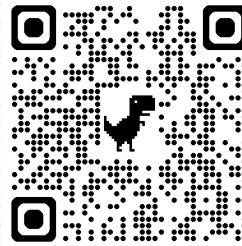
V A N O I T N E V E R P E R I F I A V A E K I N
 O M N K Z E T O S T Q O B V D W Q T W Z F D I W
 N K R C K U C D I V T U C K U A C G Q N F L B P
 D D U C H O U Y D T I M V K R W Q N Q Y K O N R
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 A U U C L B Y B G P S E N T O F B N E T R F C O
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- | | | | |
|---------------|------------|---------------|-----------------|
| Accelerant | Arson | Awareness | Blast |
| BLEVE | Burn | Ceiling | Combustion |
| Conflagration | Cooling | Draught | Drill |
| Duct | Dust | Egress | Evacuation |
| Exit | Explosion | Fire | Fire Prevention |
| Flame | Occupancy | Safe Hospital | Safe School |
| Smothering | Starvation | | |



Instruction to readers

The words may be searched horizontally, vertically or diagonally either forwards or backwards, but always in straight lines. Use a ruler to cross them through as you find them.



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Answers to Safety Puzzle 31

K S S V P S S E G D E L P Y T E F A S E M J Y J
 R C E N R O S A F E T Y E S S A Y U S S F W D S
 D S B M O B O Z K C I P H A U W O R A A A K H G H
 H O E X M I J X F A N V C A L Z E H F F D M S R
 Y X W B U I T Y N L F O F C O P Y T E E F Z Y O
 T N Z K V K V I N V A J H J M Y T N T T O Y A E
 S G I W V P H W B Y X L C J D A S X Y Y B I L P
 N X B N H F P H D I J Q S Z W V J C T C A M P D
 F K W C E Y H T B K H S K K V K S F O O E A T Y
 P N K W K T M T Z J L X K B Y V E Z W M S G E K
 U Y O B G A E H N B U U E E Z M E B N P S D E S
 D W E I Q T O E E O N Q G Z P K N R H E A Y R R
 M O A C T L F O N O M A P O U D K A A T Y I T E
 C W W H X I P E Z S G Y W Z Y B E I L I I M S T
 N H B L C P N E D N E E T H X Z F N L T Q O Y S
 M W L C U Z Q G E U R V V E H H K G M I F F T O
 K K P B H U S Y O P C X E R F V Q R E O Q D E P
 Z W A I G X L S E C I A E N P A D L E N J X F Y
 X M Q Z R A X O O V E A T Y T R S K T S M R A T
 K R L A G V P L W R A R X E F R Y Y Y I H M Y S E
 F N K I Y L Y R M S T N D X N F T Z N B E G U F
 B S A F E T Y S L O G A N S W B H W G Y H I W A
 K Q E N H X N Y A D N O I T A D N U O P Q X H S
 Q T T E N H A N C E S A F E T Y H E N Y L Z K F

Please send your solved puzzle to chronicle@nsc.org.in

The name with photo of first three correct entries will be published in the next issue.

Congratulations for Correct Answers to puzzle No.31



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Material	Fiberglass Reinforced Plastic (FRP)
Working Voltage	Up to 150 KV
Total Length	Up to 6.0 Meter
Cable Length	3 Meter (Copper Cable)
Probe	Universal Discharge Head
Application	Discharging Static from HV Equipment

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- Telescopic design for compact storage and easy transport.
- High-strength FRP stiles & rungs offer excellent load capacity.
- Insulated and non-conductive for electrical safety.
- Slip-resistant rungs for secure climbing.
- Ideal for electrical, telecom, and industrial applications.



SPECIFICATIONS

Material	Fiberglass Reinforced Plastic (FRP)
Closed Length	0.9 Meter (Approx.)
Extended Length	Up to 3.2 Meter
Step Width	40 mm
Load Capacity	150 Kg.
Application	Electrical, Telecom & Industrial Use

FRP EXTENSION LADDER



- Heavy-duty FRP construction for long-lasting performance.
- Wide anti-slip rungs for extra safety.
- Non-conductive, corrosion and weather resistant.
- Suitable for electrical, industrial & maintenance work.
- Rope & pulley system for smooth extension.

SPECIFICATIONS

Material	Fiberglass Reinforced Plastic (FRP)
Length Options	6 Ft. to 40 Ft. (Opening Length)
Load Capacity	150 Kg.
Rung Type	Anti-slip
Application	Electrical, Industrial, Maintenance Work
Standards	Tested as per IEC 61478 / IS 15908

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