

GUIDELINES FOR RESTARTING MANUFACTURING INDUSTRIES AFTER LOCKDOWN

“While restarting the unit, consider the first week as the trial or test run period ensure all safety & protocols, & don't try to achieve high production targets” says Ministry of Home Affairs (“MHA”) in order to minimize the risk and to encourage a successful restart of industrial units.

In the wake of the **Visakhapatnam** incident, the National Disaster Management Authority (NDMA) has issued guidelines dated 9th May, 2020 for restarting manufacturing industries after lockdown.

- ❖ *The guidelines were issued considering that due to sudden declaration of Lockdown, it is possible some of the operators might not have followed the established Standard Operating Protocol (“SOP”) due to the closure of industrial units during several weeks of lockdown and it may result in some of manufacturing units, pipelines, valves may have residual chemicals which may pose risk;*
- ❖ *When there is no movement in the factories, many energy sources can prove to be hazardous to labours that are servicing or maintaining electrical, mechanical or chemical equipment. When heavy machinery and equipment are not maintained periodically, they can become dangerous for the operators/engineers;*
- ❖ *Combustible liquids, contained gaseous substances, open wires, conveyor belts and automated vehicles make manufacturing facilities a high-risk environment. Improper enforcement of safety codes and improperly labelled chemicals can further pose serious health hazards.*

GENERIC GUIDELINES

1. While restarting the unit, consider:
 - First week as the trial or test run period;
 - Ensure all safety protocols;
 - Not try to achieve high production targets;
 - Inspection of all equipments as per safety protocols
2. The employees who *work on specific equipment are sensitized* and made aware of the need to identify *abnormalities* like strange sounds or smell, exposed wires, vibrations, leaks, smoke, abnormal wobbling, irregular grinding or other potentially hazardous signs which indicate the need *for an immediate maintenance or if required shutdown.*
3. In case the industry has any *difficulty in managing crucial backward linkages* that may be critical for their safe functioning, they should approach the *local district administration* for specific assistance.

FOR SPECIFIC INDUSTRIAL PROCESSES

1. Storage of raw material

- 1.1 *Inspect* the storage facilities for any signs of spills, wear and tear during the lockdown;
- 1.2 Check for already opened storage vessels/containers/bags/silos for possible oxidation/chemical reaction/ rusting/ rotting etc.;
- 1.3 HAZMAT Chemicals in the storage need to be checked for chemical stability before using for any processes;
- 1.4 Ensure ventilation and proper lighting before entering the storage areas;
- 1.5 Sense for abnormalities like strange sounds or smell, exposed wires, leaks and smoke;
- 1.6 Check supply pipelines/valves/conveyor belts for any signs of damage/wear & tear;
- 1.7 Check the storage building for any signs of distress and damage to the roof.

2. Storage of products

- 2.1 Check the storage facilities for any damages or wear and tear

3. Guidelines for the workers

3.1 Ensure 24 -hour sanitisation of the factory premises

- 3.1.1 Factories need to **maintain a sanitisation routine** every two-three hours especially in the common areas that include lunch rooms and common tables which will have to be wiped clean with disinfectants after every single use.
- 3.1.2 For **accommodation, sanitisation needs to be performed regularly** to ensure worker safety and reduce spread of contamination.

3.2 Entrance health checks

- 3.2.1 **Temperature checks** of all employees to be done twice a day.
- 3.2.2 **Workers showing symptoms should not report to work.**

3.3 Provisions of hand sanitizers and mask to all employers

- 3.3.1 Providing **gloves, masks and hand sanitizers** to be done at all factories and manufacturing units.

3.4 COVID 19 health and prevention staff education

- 3.4.1 **Education** on safety steps to take from entry to exit in the factory
- 3.4.2 Measures to take **precautions** at personal level

3.5 Quarantine measures for supply and storage of goods

- 3.5.1 Sterilise boxes and wrapping brought into factory premises

- 3.5.2 Isolate and sanitise finished goods as appropriate
- 3.5.3 Delivery of goods in shifts

3.6 Physical distancing measures

- 3.6.1 Create physical barriers to ensure the physical distance within the work floor and dining facilities
- 3.6.2 Provide face protection shields along with masks and PPEs.

3.7 Working in shifts

- 3.7.1 Factories that work 24 hours at full production capacity should consider one hour gap between shifts, except factories/plants requiring continuous operations.
- 3.7.2 Managerial and administrative staff should work one shift at 33 per cent capacity as per MHA guidelines; but while deciding which particular person to be included in 33% at any given point of time, overriding priority should be given to personnel dealing with safety.
- 3.7.3 Ensure no sharing of tools or workstations to the extent possible. Provide additional sets of tools if needed.

3.8 Scenario plan on discovering a positive case

- 3.8.1 Factories have to prepare accommodation to isolate workers, if needed.
- 3.8.2 HR has to help manage the whole process for individual, all travelling employees also to undergo **mandatory 14-day quarantine**.

3.9 Presence of skilled workers

- 3.9.1 Workers involved in dealing with hazardous material must be skilled and experienced in the field. No compromise on deployment of such workers should be permitted when an industrial unit is opened up.

4. Manufacturing Processes

- 4.1 *To Complete Safety Audit* of the entire unit before taking up starting activities;
- 4.2 *Mechanical cleaning* followed by air /water flushing and chemical cleaning of pipelines, equipment and discharge lines;
- 4.3 To Run-in of rotatory equipment under supervision;
- 4.4 To *check for lining and signs of wear and tear* of Boilers/ furnaces/ heat exchangers;
- 4.5 To ensure *all pressure, temperature gauges are functional*;
- 4.6 *Tightness test*: Many process units handle combustibles or toxic substances (or both), the leakage of which could result in disaster, damage, or economic loss. To prevent the occurrence of such incidents, it is necessary to confirm that the plant complies with the required tightness before start-up;
- 4.7 *Service test* need to be performed for all water, compressed air, and steam piping and equipment with normal operating fluids. Leakage points found during the test

are retightened. *The test is deemed successful if no foam is observed from soap solution, or if no water or condensate is observed visually;*

- 4.8 *To ensure vacuum hold test:* All vacuum systems must be leak tested. Each leak is tagged, making it easy for the maintenance team and personnel of the next shift to continue with the work;
- 4.9 *Trial testing to be carried* out before the full-fledged production is initiated with full human resources;
- 4.10 To ensure the arrangement for round-the-clock emergency crews/ professional technical teams provided with MAH and cluster of MAH should have an extended coverage of 200 km to reach transport accident spots for help;

Please feel free to reach out to us!!!

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Thanks and Regards

Team ~ K. Bagla & Associates

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