

## Regulation DD-21.0: Machinery Installation General Requirement

- 21.1 Machinery Layout Plan and dimensions with list of machine/equipment shall be submitted by the licensee/owner of the facility prior to installation. All machinery installation shall comply with applicable EHS-Trakhees-PCFC Guidelines and Regulations.
- 21.2 Full operational details and technical specifications with relevant drawings/brochure/catalogue etc. shall be submitted. Wherever applicable, full technical details/specifications/drawings with test certificates for the installation of Boiler, Heating oven, Furnace, Pressure Vessels, Compressors and Lifting Equipment, shall be submitted for approval prior to installation.
- 21.3 Minimum 1 meter horizontal clearance from the walls/structure to the machine/equipment and minimum 2 meters in-between each machine/equipment shall be maintained.
- 21.4 All service lines & power cables etc. either to be put in covered trenches or routed through elevated cable trays/pipe rack and shall not be laid down directly on the floor.
- 21.5 All electrical operated machine/equipment shall be fitted with ELCB's and properly earthed/grounded as per DEWA regulations.
- 21.6 All moving/rotating/dangerous parts of the machine/equipment shall be fully covered and fitted with proper safety guards. All dangerous parts of machinery shall be effectively guarded, unless they are in such a position or of such a construction as to be as safe as they would be if effectively guarded.
- 21.7 All higher/elevated working platforms/area shall also fully be covered / barricaded with suitable & rigid guardrail/handrails.
- 21.8 All conveyor belts shall be fully covered / enclosed to prevent dust generation/emission.
- 21.9 Wherever applicable, full technical details/specifications/drawings for the Dust Collection, Extraction/Filtrations system and Waste Water Treatment Plant, shall be submitted for approval prior to installation.
- 21.10 Effective measures shall be provided for prompt/emergency shut off the power to any machinery in respect of which this is necessary, in an emergency.
- 21.11 When any cleaning, maintenance or repair work that would expose any person to danger has to be undertaken on machinery, the machinery shall be stopped and power supply switched off, before

the work is begun and adequate measures shall be taken to ensure that the machinery cannot be restarted (Lockout/Tag out) until the work has been completed: Provided that a responsible person may restart the machinery for the purpose of any testing or adjustment which cannot be carried out while the machinery is at rest. "Lockout/Tagout (LOTO)" refers to specific practices and procedures to safeguard employees from the unexpected energization or start-up of machinery and equipment, or the release of hazardous energy during service or maintenance activities. This requires that a designated individual turns off and disconnects the machinery or equipment from its energy source(s) before performing service or maintenance and that the authorized employee(s) either lock or tag the energy-isolating device(s) to prevent the release of hazardous energy and take steps to verify that the energy has been isolated effectively.

21.12 The term machinery includes any lifting appliance, mechanized hatch cover or power-driven equipment.