

Partition walls are gradually contaminated by the deposit of contaminants held in the air (airborne contamination), by the projection of contaminants during process operations or by other types of contact, especially personnel working in the facility.

In the case of particles, contamination is inert and in the case of biocontamination it is living: microorganisms and development of a biofilm on the surface of interior walls.

The cleaning and disinfection of interior walls must enable contamination to be reduced to an acceptable level determined for the activity in question; the success of the operation depends on the cleaning method and the experience of the personnel but also on the clean ability of the partition wall, i.e.: on its materials and design.

Partition wall materials

Watertight and rot proof, they must neither release nor retain particles and must be inactive with respect to the development of microorganisms. The surface of the partition wall must be as smooth as possible to allow it to be decontaminated easily and thoroughly.

Materials are shock and scratch resistant: Corridors and personnel traffic areas together with equipment must be correctly dimensioned, door clear openings must be properly calculated and sharp edges must be avoided to restrict possible shocks and scratching.

They must also be hard wearing and resistant to products (chemical products) and cleaning methods.

Finally, the quality of the panel face ensures that over time the state of the partition wall surface remains stable. It must be selected depending on the constraints of ambient conditions and on the level of aggressiveness encountered.

Partition wall design

Junctions of interior walls with floors and ceilings must be clean and neat, preference being given to rounded, smooth shapes.

Aspects to be avoided as much as possible are nooks and corners, recesses, sharp edges, horizontal seals.

Offers should include door frames with gentle shapes or fully flush with the interior wall, ergonomic handles, wrap-over rails, glazed window frames as flush as possible and openings must be protected to eliminate any salting-out of contaminants.

The incorporation of specific technical functions: Ducting that can be inspected, cable raceways, air extraction ducts, signalling systems, laminar flow hoods, etc, must be put in place with the greatest possible care to ensure tightness of the unit and the greatest possible surface smoothness.

Finally, the type and surface of the floor must be especially studied.

Cleaning methods and products

For routine maintenance, it is recommended that dosages are respected, that products are diluted with temperate water, times of contact respected and thorough rinses made with clarified water.

All mixes of products must be avoided.

Stainless steel panel faces require more frequent cleaning to maintain a visually satisfactory appearance. Cleaning with no chlorinated detergents followed by thorough rinsing with clarified water is enough. The use of hard brushes, steel wool or metal sponges are likely to scratch the metal and must be avoided. (cf. ASPEC guide «Clean room partition walls».)

Easily cleaned, laminate panel faces are not however resistant to methods requiring plentiful water.

Fittings, locks, seals and other finishing accessories must also be regularly checked.

Decontamination

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