Walk-in Refrigerator Rehabilitation

PURPOSE:

The purpose of this document is to provide guidance to regulated industry regarding existing walk-in refrigeration box design and finish requirements. A permit to remodel, with plans submission, is required before undertaking the rehabilitation of a walk-in refrigerator.

REHAB OR REPLACE:

Serious consideration must be given to whether rehabilitation or replacement is the appropriate course of action. The public is advised to investigate the costs associated with all of these options.
Existing "built in" refrigeration boxes that hold temperature, have finishes that are impervious, sealed, easily cleanable and are in good repair, need not be upgraded or rehabilitated until such time as the finish becomes uncleanable, is in disrepair or the unit becomes unserviceable.

Existing cam-lock style boxes, that are otherwise serviceable but require refinishing, may be refinished using various commercially available third-party certified organic coating products. Products approved under ANSI/NSF Standard 51 for splash zone use in food establishments would be acceptable for this purpose.

The unit interiors may also be refinished or recovered. Cam-Lock style refrigerator boxes with skin damage should be repaired by a certified and experienced HVAC professional. Panels with structural damage must be replaced.

CRITERIA FOR REHABILITATION:

The following criteria are provided as guidance for certified fabricators, experienced HVAC professionals, and sheet metal fabricators for the refurbishment of walk-in refrigerator or freezer box interiors. These criteria are meant only to apply to a walk-in refrigerator box that is capable of maintaining proper temperatures as required by Regulations 2010, section 3-5, but that does not meet materials and construction standards provided in Regulations 2010 section 4-2:

1. The interior walls and ceiling are to be, at a minimum, aluminum electroplated galvanized steel, of 22-24-gauge material (0.040 in.) or better, with a stucco-embossed or flat finish, or stainless steel. Aluminum diamond plate may be used as protective wainscoting in warehouse walk-in boxes.
2. Walls are to be vertically seamed between panels and joined using a like-material concealed fastener such as an internal hem strip, with a gasket at the seam and closed to 1/32inch. Ceiling panels are to be joined in a like manner. Butt-jointed panels are not allowed. Vertical corners must have minimum continuous radii of ¼ inch.
3. Fasteners shall not be used to secure wall or ceiling panels. Any fasteners that are used for other purposes must be countersunk and concealed with "cam-lock"-type flat caps.
4. Floors:
    a) Quarry tile, with quarry tile base, sealed with epoxy grout;
    b) Aluminum diamond plate ¼ inch or better, welded so as to be a seamless pan, with minimal fasters, and an integral diamond plate base-cove;
    c) Sealed concrete with proper cove base and corner treatment providing a minimum ¼ inch radius at the floor-to-wall juncture and the corners.
    d) Other approved materials, such as poured epoxy systems, with proper base cove treatment;
5. Doors must be third-party sanitation certified component walk-in door. Vertical and ceiling door jams are to be finished as in item 2 above. In lieu of an approved component door, in situations where such a door is not commercially available, the existing door interior and door jambs are subject to the same finish as noted item 2 above, properly fit, and with approved gaskets. The exterior of such a door must be sealed, smooth and easily cleanable.
6. All drain/condensate/refrigeration lines must not have exposed copper and must be sealed in accordance with NSF standard 2 or painted with epoxy paint and all penetrations for such lines must be sealed properly.
7. Refrigeration components must be third-party certified to sanitation standards and must be drained indirectly to an external floor sink or other approved device (such as an external evaporation pan). The BTU rating for the given ambient temperature must meet or exceed those provided for by the calculations listed in the ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) Refrigeration Handbook.