Standex Refrigerated Solutions Group
dba: NORLAKE or MASTER-BILT
727 Second Street
Hudson, WI 54016

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RESEARCH REPORT: RR 25197
(CSI# 13030)

Expires: September 1, 2020
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Code: 2017 LABC

GENERAL APPROVAL – Technical Modification, Renewal, & Clerical Modification - Nor-Lake Fineline and Kold Locker walk-in cooler and freezer panels

DETAILS

Panels for the coolers and freezers consist of aluminum skin and a core of 4" thick foam plastic identified as Dow Chemical Company Voracor CR 1140-HE Polyol and CE 108 foamed-in-place isocyanate having an average in-place density of 2.15 pounds per cubic foot. The panels are held together by use of Cam Lock fastening devices along the edges. Flame spread and smoke density ratings per ASTM E84 are 20 and 250 respectively, for the core material. The self-ignition temperature of the foam per ASTM D-1929 is 1022 °F. The flash-ignition temperature of the foam per ASTM D1929 is 753 °F. Surface burning characteristics of the finished building unit shall not exceed 75 for flame spread and 450 for smoke developed, respectively.

Nor-Lake Fineline walk-in coolers and freezers constructed of panels described above are approved with the following requirements:

1. The coolers and freezers shall be installed in the interior of buildings.

2. Height of units shall not exceed 15’-8”.

3. The aggregate floor area of the freestanding walk-in coolers and freezers shall be less than 400 square feet. When the aggregate floor area of the walk-in cooler exceeds 400 square feet, an automatic sprinkler system shall be required in the area in which the walk-in cooler is located.

4. The panels shall be considered combustible and may be used only in areas where combustible materials are permitted by the Code.

5. Allowable Transverse Loading:

Allowable Transverse Load, (psf)			
	Panel Type		
Span, ft	Standard	Z-Bar	Ultra-Span
6	116.4	-	-
7	87.5	-	-
8	68.4	-	-
9	55.1	-	-
10	45.3	56.2	124.3
11	38.0	49.9	112.0
12	32.4	43.7	99.6
13	27.9	37.4	87.2
14	24.4	31.2	74.8
15	21.4	24.9	62.5
16	19.0	18.6	50.1

6. Allowable Racking Shear:

Height To Width Ratio	Allowable In-Plane Shear, plf
0.5:1	124.7
1:1	62.3
1.5:1	41.6
2:1	31.2

7. Allowable Axial Loading:

   The allowable axial load is 608 plf for all wall panels not to exceed 15’-8”.

8. Maximum Capacity Per Connector (Cam Lock):

Load Type	In-Plane	Transverse
Shear, (lbf)	120	197
Tension, (lbf)	117	

9. Maximum Wall to Slab Connection Capacity:

Load Type	Allowable Load (lbf)
Shear, (lbf)	741
Tension, (lbf)	

10. Minimum thickness of the metal skins are .034 to .046 inch thick for the painted or unpainted aluminum.

11. The panels shall be fabricated in the shop of a fabricator licensed by the Department and shall bear identification markings.

12. Separate approval shall be required for electrical installations enclosed in the panel. Also, no electrical, plumbing or mechanical can be installed after fabrication of the panels.

DISCUSSION

The technical modification is to update the core material from FE800 and FE245B foamed-in-place isocyanate to CR 1140-HE and CE 108 foamed-in-place isocyanate.

The clerical modification is to update the report to the 2017 Los Angeles City Building code, change company .

The report is in compliance with the 2017 Los Angeles City Building code.

The approval is based on the foam plastic insulation requirements of Section 2603 of the 2017 Los Angeles City Building Code and structural tests.

The steel faced panels are not approved under this report. Due to the fact these panels exceed a smoke density of 450.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

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This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

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