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Craig Industries, Inc.
401 Delaware Street
Quincy, IL 62301

Research Report: RR # 26193
(CSI #13030)

Attn: Lucas Craig
(217) 257- 4243

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GENERAL APPROVAL – Renewal – Craig Industries, Inc. Refrigeration Panels for Walk-In Coolers and Freezers.

DESCRIPTION

The panels are manufactured utilizing 24 and 26 gauge stucco embossed or painted galvalume, galvanized metal, or 24 gauge smooth stainless steel skin on the exterior face and 24 or 26 gauge painted or stucco embossed galvanized steel, or 24 gauge smooth stainless steel skin on the interior face. The panel skins are in compliance with ASTM A792 for galvalume, ASTM A653 for galvanized metal and ASTM A240 and ASTM A666 for stainless steel. The panel core consists of foam identified as Dow Panel Core 20 extruded polystyrene (1.6 pcf density with 15 flame spread index and 165 smoke density rating per ASTM E84) or BASF P1230 isocyanate component and Elastopor P19051R foamed-in-place polyurethane (2.2 pcf density with 25 flame spread index and 450 maximum smoke density rating per ASTM E84). The panels are fabricated in a thickness of 4 inches with typical width of 47 inches and a maximum panel height of 20 feet connected with not less than (3) cam-lock devices.

Elastopor P19051R foamed-in-place polyurethane and Dow Panel Core 20 extruded polystyrene shall have a minimum self-ignition temperature of 600° F and minimum flash ignition temperature of 800° F.

The panels are approved as structural wall and ceiling panels for use for interior, non-fire-rated walk-in coolers and freezers. The allowable loads for exterior panels subjected to wind loads shall be evaluated on a case by case basis.

Craig Industries, Inc. refrigeration panels for walk-in coolers and freezers described above are subjected to the following conditions:

1. The panels are approved for us in accordance with Section 2603 of the 2020 Los Angeles City Building Code and shall comply with all requirements therein.
2. Use of the panels shall be limited to locations where combustible materials/construction is permitted by the 2020 Los Angeles City Building Code.
3. Panels shall be fabricated in the shop of a licensed fabricator approved by the Los Angeles City Department of Building and Safety. Each panel shall be identified by the manufacturer's name. Fabrication in unlicensed shops will invalidate this approval.
4. Materials for the panel shall be as specified in the DESCRIPTION section above. Test data by an approved testing agency shall be submitted to the Department upon request to verify materials' specifications.
5. Complete plans and design calculations bearing the stamp and signature of a civil or structural engineer or architect registered in the State of California, shall be submitted to the Department for approval of each job.
6. An approved fire retardant roof covering (class "A" or "B") shall be placed over the panel when used as exterior roof panels.
7. No permanent loads, equipment or storage loads shall be carried by the ceiling/roof panels with the exception for the evaporator. If evaporator is supported from the top panel, it must be accounted for in calculations for ceiling panel loads. For equipment loads, calculations demonstrating that the applied loads are less than the maximum allowable loads must be submitted to the Department for review for each project. The calculations must be prepared by a California registered civil engineer or architect.
8. A factor of safety of 2.0 is included in all the allowable loads listed below. Design of buildings utilizing the panels shall be in accordance with the requirements of the 2020 Los Angeles City Building Code and the design data specified.
9. The maximum allowable wall spans shall be as follows:

Panel Length	Panel Type	L/360 (PSF)	Allowable load (psf)
8 ft	26 ga. stucco embossed steel	39	39
10 ft	26 ga. stucco embossed steel	30	35
12 ft	26 ga. stucco embossed steel	14	14
14 ft	26 ga. stucco embossed steel	14	14

Allowable Loads are based on a factor of safety of 2.0.

10. The ultimate loads for cam-locking devices:

Wall to Floor Connection (lbs.)	Wall to Wall Connection (lbs.)	Roof to Wall Connection (lbs.)
328	339	322

Allowable Loads shall be based on a factor of safety of 2.0.

11. Locations of connectors must be detailed on approved plans, the spacing of connections shall be calculated for each job but not less than two per width of panel (Width of panel = 47”).
12. Each panel shall be stamped with the company name, surface burning characteristics of the product on the panel edge using an indelible ink.
13. No increase in allowable stresses is allowed for the values indicated above for short duration of loads due to wind or seismic forces.
14. Wall panel to floor attachment shall be designed utilizing approved fasteners.
15. A separate approval from the Electrical Testing Laboratory shall be required for electrical installations within the panels. Plumbing and waste line may extend at a right angle through the wall panels but are not permitted vertically within the core.
16. The panel foam shall be separated from the interior of the freezer or cooler and from the room in which it is located by use of ½-inch gypsum wallboard, ½-inch plaster or other approved thermal barrier meeting the requirements specified in Section 2603.4 of the 2020 Los Angeles City Building Code may be utilized where applicable.

EXCEPTION: The thermal barrier is not required if the cooler or freezer floor area does not exceed 400-square feet.
17. All design values and methods not included in this report shall be in accordance with requirements of the 2020 Los Angeles City Building Code.

DISCUSSION

This report is in compliance with the 2020 Los Angeles City Building Code.

The approval is based on tests on the foam per requirements of Section 2603 of the 2020 Los Angeles City Building Code, tests conducted in accordance with ASTM E-84 on the finished panels, and load tests conducted in accordance with ASTM E-72. Standard test method for determining ignition temperature of plastics is in accordance with ASTM D-1929.

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

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.

EUGENE BARBEAU, Chief
Engineering Research Section
201 N. Figueroa St., Room 880
Los Angeles, CA 90012
Phone: 213-202-9816
Email: engineering-research@lacity.org

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