

Date of Authorization
BMEC Authorization
BMEC Application

April 28, 2005
05-02-306
A2003-21

AUTHORIZATION REPORT- PanelCraft™ Roof System

1. Applicant

Craft-Bilt Materials Ltd.
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2. Manufacturing Facilities

Craft-Bilt Manufacturing Co.
53 Souderton-Hatfield Pike
Souderton, Pennsylvania
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3. Description

PanelCraft™'s structural insulated roof panel system may be used in the construction of heated and unheated sunroom additions to residential occupancy buildings.

The factory assembled structural insulated panel is comprised of a 76 mm (3") or 115 mm (4-1/2") or 152 mm (6") thick polystyrene core, two 0.6 mm (0.031") thick aluminium skins adhered to a Type II polystyrene core, having a nominal density of 24.028 kg/m³.

The adhesive used in the panels is a moisture curing, one part, 100% solid, non-volatile, Type II urethane adhesive. The panels are 915 mm (3'-0") wide, and they are available in lengths varying from 2.4 m (7'-9") to 5.7 m (18'-0").

On site, a pre-decorated 11 mm (1/2") thick gypsum board is mechanically fastened, with a metal trim clip, to the interior side of the panel to form the PanelCraft™' Roof System.

4. Authorization requested

The Applicant sought a Building Materials Evaluation Commission (the "BMEC") Authorization for the use of the PanelCraft™ Roof System, in heated and unheated sunroom additions, which may be an addition to a residential occupancy buildings that are subject to the requirements of Part 9 of the Building Code.

5. Assessment

Reports and assessments provided by the Applicant show that if the PanelCraft™ Roof System is designed, performance tested and installed in accordance with the limitations in the manufacturer's instructions, and the specific terms and conditions stated in this Authorization, the level of performance required by the Building Code will be provided.

The reports submitted, and reviewed, but were not limited to:

1. Craft-Bilt Materials Ltd. Roof Installation Guide, dated February 20, 2004.
2. Alan Zeegen Associates: documentation and drawings, dated May 2002, February 2004, May 2004.
3. Craft-Bilt Materials Ltd. Quality Control Manual.
4. National Evaluation Services, Inc., Report #NER-619, "PanelCraft™ Building Panels: Honeycomb and Polystyrene Sandwich Panels" issued October 1, 2001.
5. Buchan, Lawton, Parent Ltd Consulting Engineers, submissions dated: April 5, 2004, November 2003, and May 2004.
6. Craft-Bilt Materials Ltd. Manufacturer's Literature.
7. Canadian Building Digest CBD - 9 "Vapour Barrier in Home Construction"
8. Buchan, Lawton, Parent Ltd Consulting Engineers, Construction Drawings and Details "Polystyrene Core Panel with Pre-decorated Gypsum Covers Isometric" Drawing SA1.

6. Authorization

The PanelCraft™ Roof System is authorized for use as an innovative roof system designed for use in an acceptable heated or unheated sunroom addition, which may be in an addition to a building of residential occupancy; all other requirements pertaining to the installation of the PanelCraft™ Roof System shall be subject to the requirements of the Building Code, and are subject to the following terms and conditions.

A. Specific Terms & Conditions

1. This authorization is valid only for Craft-Bilt Materials Ltd.
2. The structural design and general review of the PanelCraft™ Roof System shall be carried out by a Professional Engineer as defined in the *Professional Engineers Act*, (Ontario); the Professional Engineer shall provide the chief building official with a document certifying that the installation conforms with this authorization.
3. The structural system supporting the authorized PanelCraft™ Roof System shall have sufficient structural capacity as required by the Building Code.
4. The maximum allowable deflection of the PanelCraft™ Roof System, as an expressed ratio of the clear span shall be L/240.
5. The 152 mm (6") PanelCraft™ Roof System is deemed to be in conformance with the thermal requirements of Subsection 9.25.2. of the Building Code.
6. Where the PanelCraft™ Roof System is used in unheated sunroom additions, the system need not meet the following Building Code requirements:
 - (a) Subsection 9.25.2. "Thermal Insulation", and Section 9.38. "Thermal Design",
 - (b) Subsection 9.25.3. "Air Barrier Systems", and
 - (c) Subsection 9.25.4. "Vapour Barriers".
7. The use of the PanelCraft™ Roof System shall be limited to residential occupancy buildings that are subject to the requirements of Part 9 of the Building Code.
8. The PanelCraft™ Roof System shall not be used where the roof assembly is required to have a fire resistance rating.
9. The PanelCraft™ Roof System shall incorporate the use of a metal trim having a minimum thickness of 0.38 mm (0.015") when securing the pre-decorated gypsum board sheathing.
10. The PanelCraft™ Roof System shall be identified by a permanent stamp, sticker or mark indicating the manufacturer's name or trademark.
11. If the PanelCraft™ Roof System incorporates an opening within the panel, or is modified to accommodate a penetration within the panel, then additional testing demonstrating that the modified roof panel conforms to the Building Code shall be submitted to the chief building official for review.

B. General Conditions

1. The use of the PanelCraft™ Roof System comply with the *Building Code Act, 1992* as amended or re-enacted from time to time and except as specifically authorized herein, with the Building Code as amended or remade from time to time.
2. A copy of this Authorization shall accompany each application for a building permit and shall be maintained on the site of the construction with the building permit.
3. The Applicant named in Part 1 hereof shall promptly notify the BMEC of:
 - (a) the failure of the Applicant, or of the material, system or building design that is the subject matter of this Authorization, to comply with any of the terms and conditions set out in 6. A. above; or
 - (b) the occurrence of any of the events described in Conditions 6. B. 4. (a) and (b) (ii) below.
4. The BMEC may amend or revoke this Authorization where it determines that:
 - (a) any change has been made to:
 - (i) the material, system or building design that is the subject matter of this Authorization;
 - (ii) the address of the applicant specified in Part 1 of this Authorization; or,
 - (iii) the ownership of the applicant specified in Part 1 of this Authorization.
 - (b) the use of the material, system or building design authorized herein;
 - (i) does not comply with the *Building Code Act, 1992* or any relevant legislation as they may be amended or re-enacted from time to time; or
 - (ii) provides an unsatisfactory level of performance, in situ.
 - (c) the Applicant, or the material, system or building design that is the subject matter of this Authorization, has failed to comply with any of the terms and conditions set out in this Authorization; or

- (d) any Building Code provision relevant to this Authorization has been mended or remade.
- 5. Where the BMEC receives additional information concerning the material, system or building design authorized herein, the BMEC may review this Authorization and the BMEC may after the review amend or revoke this Authorization as in the opinion of the BMEC may be necessary.

Dated at Toronto this 28 day of April 2005.

BUILDING MATERIALS EVALUATION COMMISSION

Edward Link, Vice-Chair