Nutex Coatings

Nuclad Cladding System

Grade-M EPS Foam Board

Impact Resistance Test Report

AS/NZS 4040.5:1996

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0	22 Mar 2012	Initial Issue
1	20 Apr 2012	Revised Specimen Description
2	24 Apr 2012	Revised Specimen Drawing

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1. INTRODUCTION

Document Type: Report of Nuclad Cladding System impact resistance test performed in accordance with AS/NZS 4040.5:1996.

Company: Nutex Coatings

Vipac Engineers & Scientists were retained by Nutex Coatings (herein referred to as *the client*) to perform impact resistance testing in accordance with AS/NZS 4040.5:1996 on a 2400mm x 2500mm Nuclad Cladding System test specimen. The purpose of this test is to verify that the impact resistance requirements outlined in AS/NZS 4040.5:1996 are met.

1.1. Test Details

Date: 15th February 2012

Time: 10:00 AM to 2:00 PM

Venue: Test Rig at Vipac laboratory, 279 Normanby Road, Port Melbourne.

Table 1: Test Personnel

Vipac Engineers & Scientists Ltd	Mr. K. D. Betts
	Mr. M. Petrovic
	Ms. S. Lamande

2. STANDARDS AND VARIATIONS

AS/NZS 4040.5:1996 Method 5: Resistance to impact (sandbag) for wall boards

AS/NZS 4256.4:2006 Part 4: Unplasticized polyvinyl chloride (uPVC) wall cladding boards

3. TEST SAMPLE

3.1. Specimen Description

The client has specified the following procedure for manufacturing the Nuclad Cladding System test specimen:

- The cladding test specimen consisted of 75mm thick M Grade Expanded Polystyrene (EPS) panels fixed to a 35mm x 90mm pine stud frame at 450mm stud centres.
- The Nuclad Cladding System uses a synthetic, fire retardant wall wrap (112 gsm non-woven micro porous polyolefin fabric) for use under wall cladding on timber buildings.
- The external render and finish were applied to the test specimen as follows:
    1) The RIB Basecoat (polymer modified cement based render) is applied to the EPS insulation. The alkaline-resistant fiberglass reinforcing mesh (5mm x 5mm; 160g/m2 minimum) is then added and a second Rib Basecoat layer applied. The total render thickness is to be no less than 4mm.
    2) The acrylic texture coating is then applied.

3.2. Specimen Size & Fixing

The Nuclad Cladding System test specimen panel dimensions and orientation are shown in **Figure 1**. The 75mm thick M Grade panels were arranged to produce a total surface area of 6.0m^2. The client using their approved flexible foam sealant adhesive when sealing the inter-panel joins.

The test specimen panels were fixed to the frame using 100mm long, Class 3, 10 Gauge needlepoint screws and 48mm diameter NuClad Plastic Washer with an average vertical faster spacing of 370mm and horizontal spacing of 450mm.

3.3. Specimen Schematic

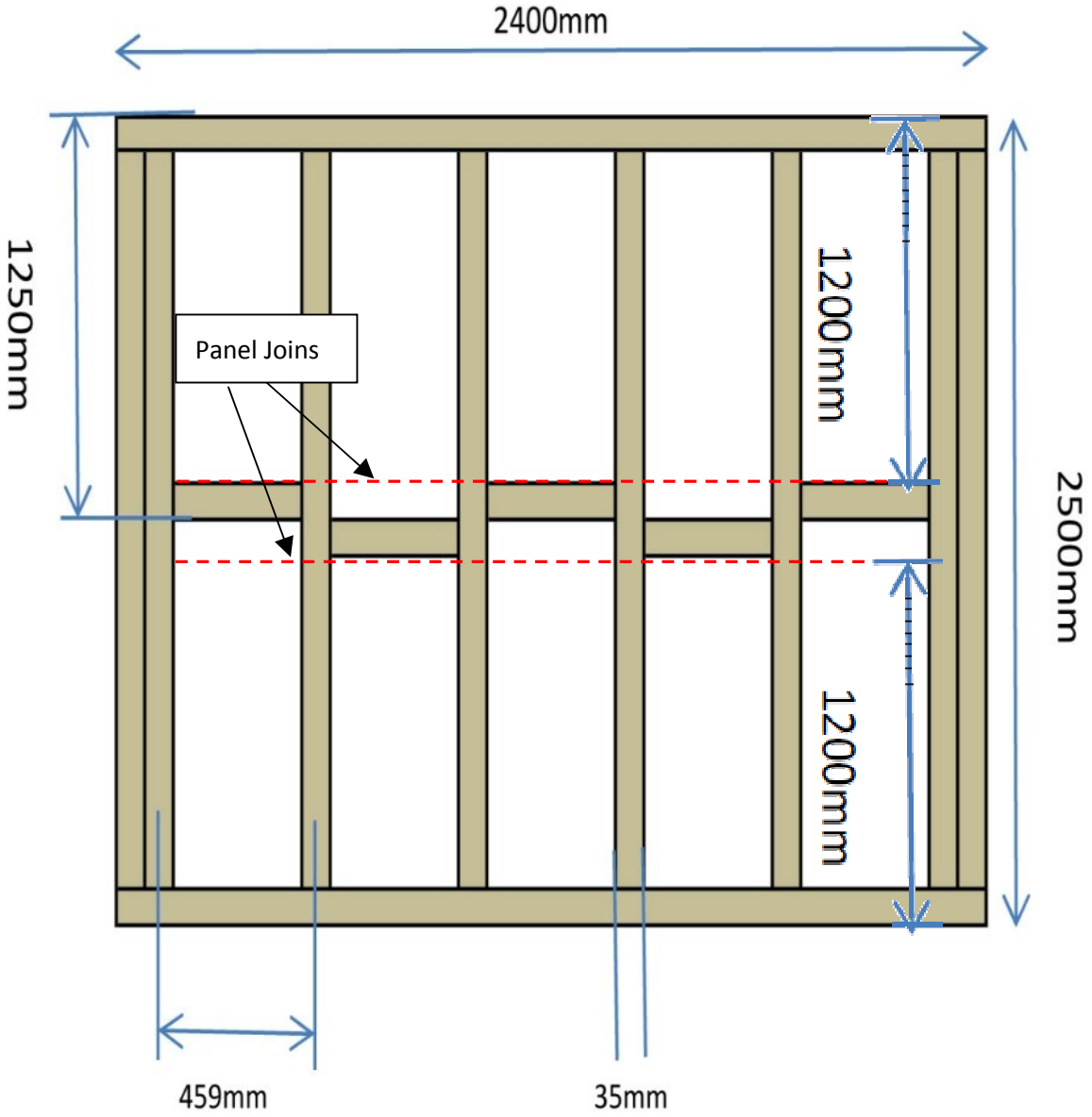

Figure 1: Test Specimen

4. TEST PROCEDURE

The test specimen was placed horizontally on a flat concrete floor with the render facing upward. A 25kg cylindrical sandbag was suspended 1m above the test specimen at the locations detailed in Figure 2. The sandbag was released and the specimen impacted. The specimen was then examined to determine if the impact had damaged, deformed or dislodged the cladding or caused the cladding to disengage.

4.1. Impact Locations

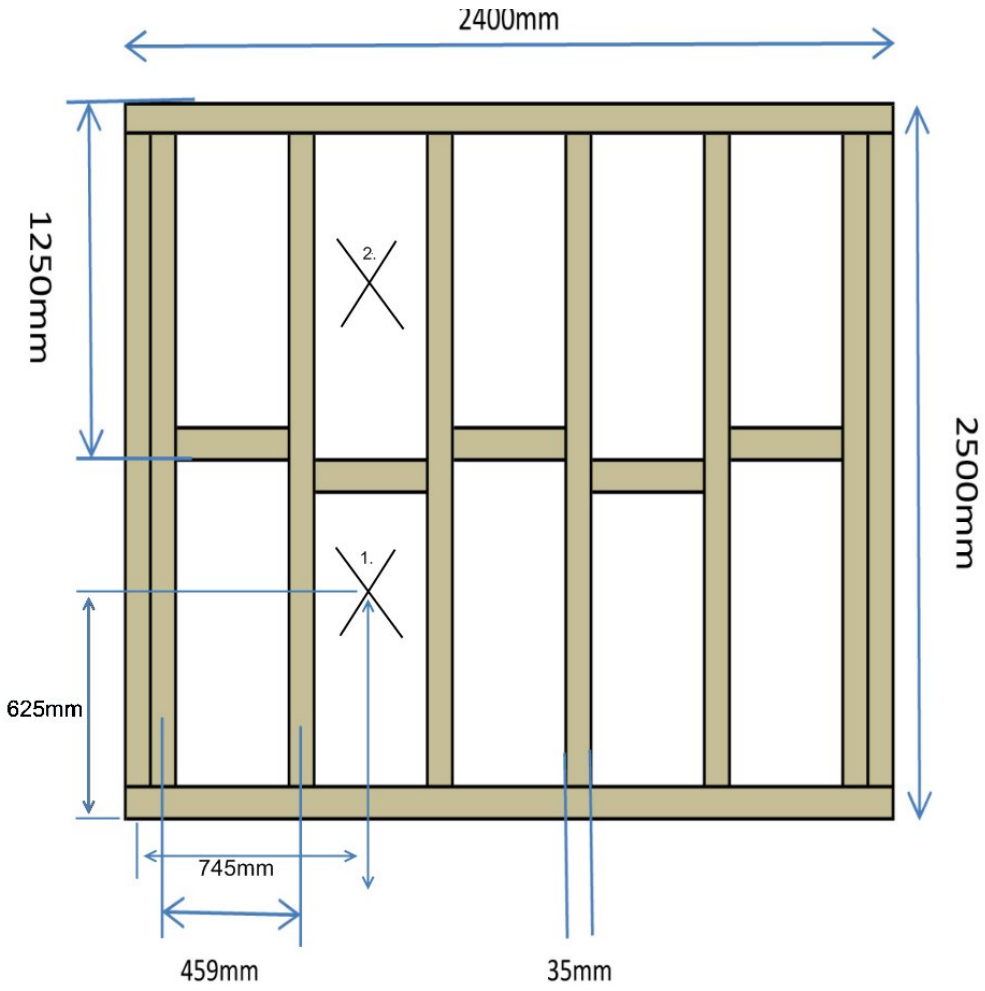

Figure 2: Impact Locations on Test Specimen

5. SUMMARY OF RESULTS

The test specimen did **not** experience any damage, deformation or dislodgement of the cladding as a result of the impact test. The impact did **not** cause the cladding to disengage.

The Nuclad Cladding System specimen as presented by Nutex Coatings **passed** all of the nominated criteria as detailed in AS/NZS 4040.5:1996.

Table 2: Fixing Concentration Requirements

Wind Region	Stud Centre Spacing	Minimum Fixing Concentration
N1	450mm	8 Fixings per m^2
N2	450mm	8 Fixings per m^2

APPENDIX A

Test Images

Figure 3: Sandbag impacting at Point 1

Figure 4: Sandbag impacting at Point 2