Linear Thermal Transmittance (Ψ)
and Temperature Factor (ƒ)
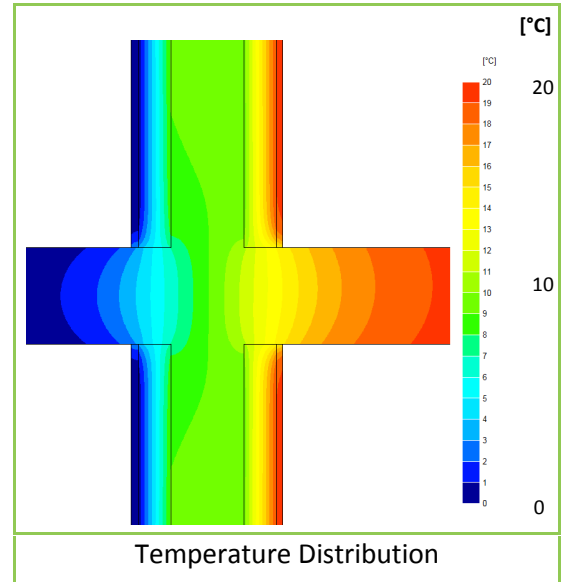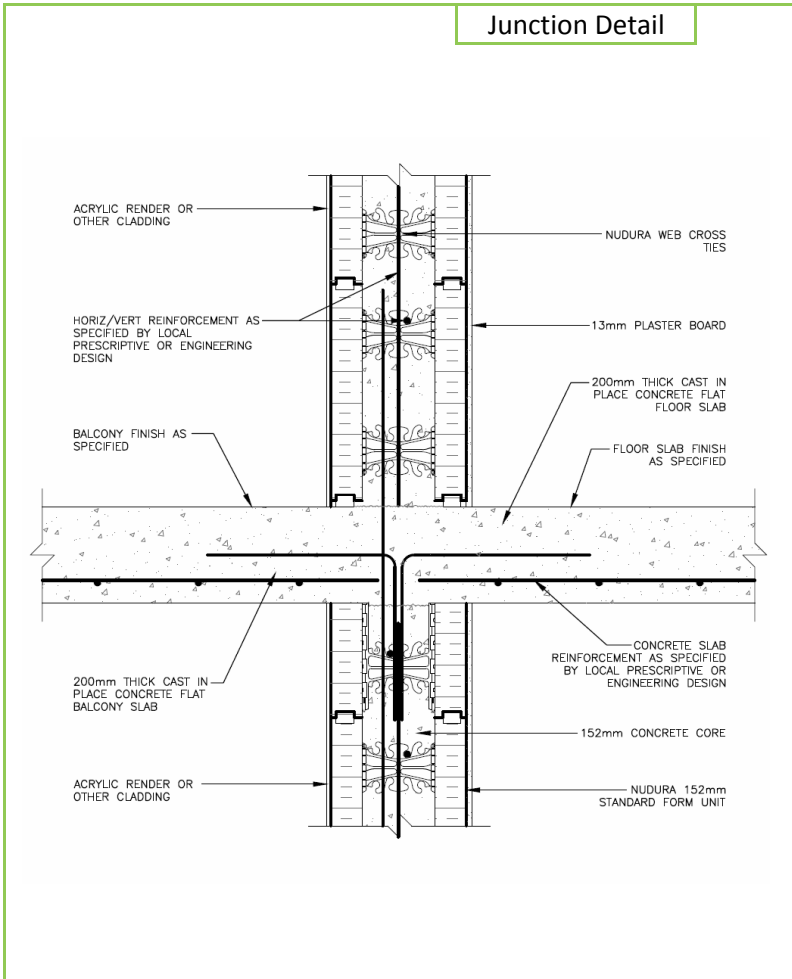
c4ci
Consultants Construction Innovation

Certificate No:	*C4TM – 001569 vs. 0*	Issued:	**Monday 10 June 2013**

Issued to:*Jean-Marc Bouvier*
Nudura

NUDURA Corporation
International Sales & Field Support

Tel: Mob +44 (0) 7766 118711
Email: jmb@nudura.com
www.nudura.com

General Construction Specification: (see detail below for full construction)	Main/Load Beaing::	152mm (nominal) Dense Concrete Core, λ<=2.00
	Insulation:	2x 67mm layers of EPS, λ = 0.036
	Balcony:	Cast-in-situ and continuous with internal floor
	Cladding:	9mm of Render OR 102mm Brick OR other Cladding

Description:	ICF Wall, Balcony	
Reference:	E8	Balcony, within dwelling, Standard Wall

Junction Detail

Labels on detail:
- ACRYLIC RENDER OR OTHER CLADDING
- HORIZ/VERT REINFORCEMENT AS SPECIFIED BY LOCAL PRESCRIPTIVE OR ENGINEERING DESIGN
- BALCONY FINISH AS SPECIFIED
- 200mm THICK CAST IN PLACE CONCRETE FLAT BALCONY SLAB
- ACRYLIC RENDER OR OTHER CLADDING
- NUDURA WEB CROSS TIES
- 13mm PLASTER BOARD
- 200mm THICK CAST IN PLACE CONCRETE FLAT FLOOR SLAB
- FLOOR SLAB FINISH AS SPECIFIED
- CONCRETE SLAB REINFORCEMENT AS SPECIFIED BY LOCAL PRESCRIPTIVE OR ENGINEERING DESIGN
- 152mm CONCRETE CORE
- NUDURA 152mm STANDARD FORM UNIT

Temperature Distribution

Linear Thermal Transmittance W/m.K	
Ψ =	**0.720**

Temperature Factor[3] for Humidity and Mould	
ƒ =	**0.729**

Calculation Prepared By: Matthew Wright *MA Physics (Oxon) PGCE*

Notes: *Calculation based upon internal heat loss areas, applicable in UK Building Regulations and SAP calculations.*
-
1. Ψ and *ƒ* are only valid for the detail drawn and described above.
2. The Ψ and *ƒ* quoted are considered valid for U-value(s) **Wall<= 0.248** W/m².K, (allowance of **+/- 20%**, following the present guidance from B. Anderson, BRE, correspondence dated 24/02/2012, for the UK market). The use of different claddings may affect the U-value slightly, but will have no material impact on the calculated values used here, in this case.
3. In dwellings, UK regulations stipulate that a temperature factor, *ƒ*, that is >0.75 would avoid the risk of mould growth.
   For other nations, jurisdictions and climates, please consult the local building regulations that apply for avoiding mould and condensation.
   (For example, typical requirements may be: Netherlands: 0.65; Switzerland: 0.75; Belgium: 0.7; Germany: 0.7; Finland: 0.87. *French, German and other standards often do not indicate a single number for acceptable risk, but are dependent on circumstances.*)
4. Calculations have been performed in accordance with:
   - **EN ISO 10211_2007** *(British Standards)*
   - **IP 1/06** & **BR497** *(BRE Press)*
   and with reference to the following publications:
   EN ISO 6946 *(British Standards)*
   BR443 *(BRE Press)*