

DINCEL STRUCTURAL WALLING

OMITTING CRACK CONTROL FOR ENGINEERS

WHY ENGINEERS CAN OMIT CRACK CONTROL STEEL IN DINCEL WALL

The Australian Concrete Structures Code AS3600, Clause 11.6.1 requires minimum reinforcement in concrete walls because of crack control purposes.

The American Code (ACI-318) and the British Code (BS-8110) allows the design of concrete walls without reinforcement, and AS3600, Section 11 is in very close agreement with Section 22.6 of ACI-318, Section 14.5 of ACI-318 allows plain concrete wall design.

The certification of Dincel-Wall provided by the University of New South Wales, Sydney, Australia ([Download – Structural Engineering Design Certification](#)) and ([Download – Common Engineering Questions No: 12](#)) explains the approaches of the American Code which is the base and a more comprehensive version of AS3600.

The Building Code of Australia (BCA) does not stop an Australian engineer in adopting ACI-318 or BS-8110.

The reason why crack control reinforcement in Dincel-Wall is not required is explained in ([Download – Common Engineering Questions Nos: 1, 2 and 11](#)) and the above references. The Cochlear Building – Macquarie University, Sydney, Australia built by Watpac Construction consists of a basement wall that is 140m long with no horizontal (i.e. crack control) reinforcement or joints.

Based on the above and particularly Dincel-Wall being certified by the University of New South Wales, it is therefore appropriate to design and construct walls without horizontal (crack control) reinforcement. The elimination of horizontal reinforcement offers the following benefits:

1. Simplifies installation, speeds up the construction, improves concrete placement and reduces cost.
2. Less reinforcement means significant help to our environment due to less energy usage to produce steel reinforcement and less CO2 emission.
3. No horizontal steel means less potential of steel corrosion. Dincel-Wall is waterproof if constructed in accordance with Dincel's Construction Manual. ([Download – Waterproof Walls](#)).

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