

# Safety and health alert

## 07/02 Collapse of a tilt-up concrete structure

### Incident

On Wednesday, 18 September 2002, at a construction site in Myaree, a collapse occurred involving roof steelwork and precast concrete wall panels, resulting in the death of a workman.

### Factors

- Unusually large unsupported steel span.
- More than one roof rafter in place without adequate lateral ties.
- Panel bracing and securing of panel base not in accordance with specifications.
- Inadequate tie-in of cast-in-brackets and bracing points to reinforcement steel.

### Recommendations

- Shop drawings to be available on site and include details as per AS 3850 Part 1.
- Details of cast-in brackets and reinforcement steel are checked by a competent person prior to pouring the panel.
- Record keeping relating to panel concrete pours and testing to confirm readiness for lifting of panels.
- Panels to have identification markings, date of casting and weight clearly stated to assist craneage operations.
- The base of all panels in their vertical position shall be laterally restrained in both directions, i.e. against inward and outward movement.
- Braces installed in accordance with the supplier's instructions in terms of setout.
- The fixing of the brace to the floor slab should be in accordance with the bolt manufacturers requirements and a complete record of all installation torques be kept including regular in-place checks after installation.
- Steel erection methods or sequence shall ensure structure stability is maintained at all times. The erector and designer should ensure the first bay erected is braced. Designers should provide guidance to steel erectors to ensure safe work procedures are maintained.
- Competent supervision to be provided on site at all times.

### Further Information

Further information can be obtained from the WorkSafe internet site [www.worksafe.wa.gov.au](http://www.worksafe.wa.gov.au), or by contacting customer service on 1300 307 877 or email: [safety@docep.wa.gov.au](mailto:safety@docep.wa.gov.au).

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