



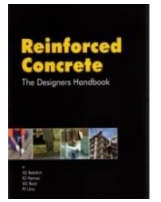
IAN HYMAS *BSc (Hons) MEngSc*

- Structural engineer for over 40 years.
- Founding partner of the firm Henry and Hymas.
- Member of the current BD-066 Standards committee for the Tilt Up and Precast Concrete (Prefabricated) Standard AS3850.

Recommended Text:

**Reinforced Concrete:
The Designers Handbook**
(2015 Revised Edition)

Beletich, Hymas, Reid and Uno



WORKSHOP SUMMARY

This course is designed to provide a raised level of awareness about how to detail the steel reinforcement, where the construction joints should be placed for each pour and the issues that may arise on-site from poor detailing.

Typical questions that arise on-site for the structural designer:

- What reinforcement detailing is required for stairs, landings or retaining walls?
- What should be done when starter bars are in the wrong position?
- Where should construction joints be located to effectively control cracking?
- What is a practical spacing of joints?
- Is the reinforcement adequately distributed in your section?
- Should the reinforcement in your footings be cogged or straight?
- Are sawn joints better than key joints in slabs?
- Should you thicken a slab on ground over a joint?
- What are the development length requirements according to AS3600-2018?
- How do you handle penetrations in beams and slabs?



PROGRAMME (8.30 - 9.00 Registration)

9.00 - 10.30 Session 1

- PRACTICAL DETAILING FOR 'FOOTINGS, PIERS & PILES'

- Reinforcement details required to ensure footings can be designed "to work".
- Practical on-site guidelines to solve issues including boundaries, column locations and off sets.
 - Localised soft soils or high water tables may require a redesign of a footing or one off adjustments to standard designs.

10.30 - 11.00 Morning Tea

11.00 - 12.30 Session 2

- PRACTICAL DETAILING FOR 'SLABS ON GROUND'

- Reinforcement details required to ensure concrete slabs on ground are designed according to the detailing requirements of AS3600-2018.
- Practical on-site guidelines to solve factors such as boundaries, soil conditions and large eccentricities.

12.30 - 1.30 Lunch (Provided at Venue)

1.30 - 3.00 Session 3

- PRACTICAL DETAILING FOR 'COLUMNS AND WALLS'

- Design and placement of steel reinforcement in columns and walls according to AS3600-2018.
- Examines requirements with respect to practicalities such as common reinforced concrete walls, retaining walls and soil conditions alerting designers to the pros and cons of detailing such members.
- Issues such as heavily loaded columns or columns in high rise construction (with very high percentages of steel) can lead to congestion and possible spalling.

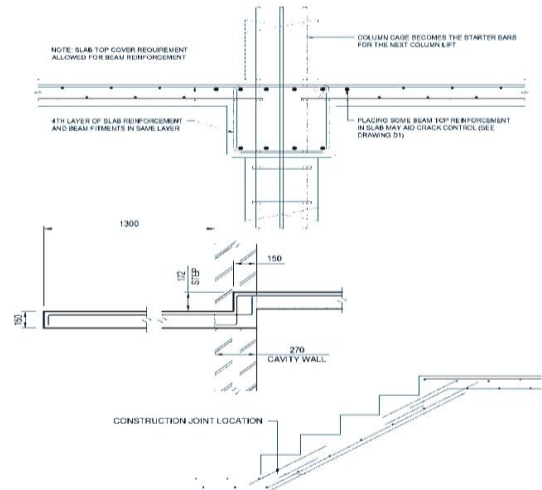
3.00 - 3.30 Afternoon Tea

3.30 - 5.00 Session 4

- PRACTICAL DETAILING FOR 'BEAMS, SLABS & STAIRS'

- Structural design of beams and slabs in various forms of construction according to AS3600-2018.
- Examines the detailing with respect to practical solutions that still fit within the frame work of the Australian Standard.
- Real life examples of such elements (eg stairs and where the reinforcement is actually required in such members).
- The problem of congested reinforcement in beams which then compromises concrete cover.

5.00 - 5.15 Certificate of Attendance & Feedback sheets



Class sizes limited to max.15
Live streaming option available

COURSE COST

- 1 day course – **\$740 pp**

DATES, VENUES & REGISTRATION

- Registration form (back of catalogue)
- Visit our website www.etia.net.au

FURTHER INFORMATION

- Office (02) 9899 7447
- Mobile 0413 998 031
- Email registrations@etia.net.au