

**GENERAL SPECIFICATION
FOR CIVIL ENGINEERING WORKS**

2006 Edition

AMENDMENT No. 2/2009 (March)

VOLUME 2

CONTENTS

(a) New Clause 14.13A **Add the following new Clause 14.13A after Clause 14.13:**

14.13A Wood preservative

(b) New Clause 14.49 **Add the following new Clause 14.49 and heading:**

CURVED FORMWORK
14.49 Curved formwork

SECTION 14 FORMWORK AND FINISHES TO CONCRETE

(c) Clause 14.01 **Replace Clause 14.01 with the following:**

The works and materials specified in Clauses 14.02 and 14.03 shall comply with the sections stated, unless otherwise stated in this Section. **Hardwood is strictly prohibited for use in the falsework.**

(d) New Clause 14.13A **Add the following new Clause 14.13A after Clause 14.13:**

Wood preservative in permanent timber formwork shall comply with Clause 24.27.

(e) New Clause 14.13A **Add the marginal note “*Wood preservative*”.**

(f) New Clause 14.17(3) **Add the following new Clause 14.17(3):**

(3) Formwork ties for use in water-retaining structures and waterproof structures shall incorporate a diaphragm welded to the mid point of the tie, designed to prevent water from passing along the tie. Ties shall be degreased before being placed and shall not touch or foul the

reinforcement.

(g) New Clause 14.21(3) **Add the following new Clause 14.21(3):**

(3) In addition to drawings and calculations showing the geometry and member size and spacing of each item of formwork or falsework, the Contractor shall submit drawings showing his standard formwork and falsework details which shall include:

- (a) Details of joints and seals between shutter facing boards, shutter face and concrete at construction joints and adjacent shutters at butt joints and corners to effectively prevent loss of grout and maintain accurate alignment.
- (b) Details of shutter facing material.
- (c) Details of fixing ‘plant on’ pieces onto the shutter face.
- (d) Details of fixing and maintaining the alignment of waterstops.

(h) Clause 14.29(7) **Replace Clause 14.29(7) with the following:**

(7) If required for cleaning or inspection, temporary openings shall be provided in the formwork. Temporary openings shall not be cut in any formwork without the approval of the Engineer.

(i) Clause 14.32 **Replace Clause 14.32 with the following:**

Built-in components, void formers and box-outs shall be fixed in position before and during concreting. Unless permitted by the Engineer, void formers and box-outs shall not be used instead of built-in components. Polystyrene shall not be used for void formers and box-outs unless permitted by the Engineer.

(j) Table 14.6 **Add the following row:**

Props to cantilevers	28 days	28 days	28 days
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- (k) New Clause 14.49 **Add the following new Clause 14.49:**

Where curved or domed concrete surfaces are specified, the formwork shall be curved or domed accordingly. The alternative of replacing a curved or domed concrete surface with a series of small connecting planar surfaces will not be permitted unless:

- (a) The concrete surface will be covered by tiles,
- (b) The Contractor has demonstrated to the satisfaction of the Engineer that the irregularities on the concrete surfaces due to such alternative will not affect the final smoothness of the tiled surface, and
- (c) The Engineer's approval is given.

- (l) New Clause 14.49 **Add the marginal note "*Curved formwork*".**

- (m) New Clause 14.49 **Add the heading "**CURVED FORMWORK**".**

**Quality Management & Standards Unit
Civil Engineering and Development Department
20 March 2009**