

Monitor dimensional accuracy

Overview

This standard is about obtaining and checking survey information, monitoring reference markers and setting out information, and identifying survey problems. It is also about observing and measuring dimensional controls and identifying any deviations

This standard is for people working in the occupational area of site inspection and can be used by technicians, supervisors and managers

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Performance criteria

You must be able to:

- P1 correlate, check and calculate **information** on construction which is relevant to the **setting-out** of the project
- P2 identify any **differences** between the specified and the actual site dimensions, record them accurately and to inform the decision makers
- P3 monitor **reference markers** which are accurate, identified clearly and protected from movement or removal
- P4 use appropriate **observation methods** which meet the specified accuracy criteria
- P5 use **measuring and recording equipment** which meets the specified accuracy criteria at the level required
- P6 observe and measure **dimensional controls**, setting out points, lines and profiles accurately and record the results to meet quality standards
- P7 identify and record any **errors** in position, alignment and level and report to the decision makers
- P8 record any **setting out information** which may be of later use, and store it securely so that it is available when needed

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Knowledge and understanding

You need to know and understand:

- K1 how and why to correlate **information** on construction relevant to the **setting-out** of the project (synthesis)
- K2 how to check **information** on construction relevant to the **setting-out** of the project (application)
- K3 how to calculate **information** on construction relevant to the **setting-out** of the project (application)
- K4 how to record any **differences** between the specified and the actual site dimensions (application)
- K5 what to identify as any **differences** between the specified and the actual site dimensions (understanding)
- K6 how to inform decision makers of any **differences** between specifications (application)
- K7 how and why to monitor **reference markers** which are accurate, identified clearly and protected from movement or removal (analysis)
- K8 how to use appropriate **observation methods** (application)
- K9 what to identify and record as any **errors** in position, alignment and level (understanding)
- K10 how to record and store any **setting-out information** which may be of later use (application)
- K11 how to observe and measure **dimensional controls**, setting out points, lines and profiles accurately and record the results to meet quality standards (application)
- K12 how to use **measuring and recording equipment** which meets the specified accuracy criteria at the level required (application)

Scope/range**1 Setting-out information:**

- 1.1 dimensions
- 1.2 locations
- 1.3 levels (including inaccuracies and deviations)

2 Differences:

- 2.1 boundaries
- 2.2 levels
- 2.3 locations

3 Reference markers:

- 3.1 ground stations
- 3.2 base lines
- 3.3 benchmarks
- 3.4 elevated target positions
- 3.5 structural grid

4 Observation methods:

- 4.1 graphical
- 4.2 measured
- 4.3 instruments

5 Measuring and recording equipment:

- 5.1 mechanical
- 5.2 optical
- 5.3 electronic
- 5.4 field book

6 Dimensional controls

- 6.1 lines
- 6.2 levels
- 6.3 angles
- 6.4 distances

7 Errors – arising from:

- 7.1 transfer of lines and levels
- 7.2 use of wrong lines and levels
- 7.3 calculations

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