

# ISO 18674-1:2015-05 (E)

## Geotechnical investigation and testing - Geotechnical monitoring by field instrumentation - Part 1: General rules

---

Contents	Page
<b>Foreword .....</b>	<b>iv</b>
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and symbols .....</b>	<b>2</b>
<b>3.1 Terms .....</b>	<b>2</b>
<b>3.2 Symbols .....</b>	<b>4</b>
<b>4 Principal requirements .....</b>	<b>5</b>
<b>4.1 Geotechnical monitoring in connection with geotechnical design .....</b>	<b>5</b>
<b>4.2 Geotechnical monitoring in connection with specific questions .....</b>	<b>5</b>
<b>4.3 Requirements of a geotechnical monitoring project .....</b>	<b>5</b>
<b>4.4 Geodetic measurements .....</b>	<b>6</b>
<b>4.5 Safety requirements .....</b>	<b>6</b>
<b>5 Requirements of a geotechnical monitoring system .....</b>	<b>6</b>
<b>5.1 General .....</b>	<b>6</b>
<b>5.2 Robustness .....</b>	<b>7</b>
<b>5.3 Influencing factors .....</b>	<b>7</b>
<b>5.4 Redundancy .....</b>	<b>7</b>
<b>5.5 Stability of sensor signal .....</b>	<b>7</b>
<b>5.6 Function check and calibration .....</b>	<b>8</b>
<b>6 Location of measuring points and geotechnical parameters .....</b>	<b>8</b>
<b>6.1 Location of measuring points .....</b>	<b>8</b>
<b>6.1.1 The measuring points can be located at free surfaces, at the interface between any two media, or inside of a medium .....</b>	<b>8</b>
<b>6.2 Measurement and monitoring of geotechnical parameters .....</b>	<b>8</b>
<b>7 Carrying out the measurements .....</b>	<b>9</b>
<b>8 Data processing and verification .....</b>	<b>9</b>
<b>9 Reporting .....</b>	<b>10</b>
<b>9.1 Installation report .....</b>	<b>10</b>
<b>9.2 Monitoring report .....</b>	<b>11</b>
<b>Annex A (normative) Minimum requirements on content of instrument data sheets .....</b>	<b>13</b>
<b>Annex B (normative) Geotechnical measurements in boreholes .....</b>	<b>14</b>
<b>Annex C (informative) Field measurements in connection with the design and construction of geotechnical structures .....</b>	<b>17</b>
<b>Annex D (informative) Measurement and monitoring of geotechnical key parameters .....</b>	<b>19</b>
<b>Annex E (informative) Types of instruments and monitoring methods commonly used .....</b>	<b>21</b>
<b>Bibliography .....</b>	<b>27</b>