

# DIN 50905-1:2009-09 (E)

## Corrosion of metals - Corrosion testing - Part 1: General guidance

---

| <b>Contents</b>              |  | <b>Page</b> |
|------------------------------|--|-------------|
| Foreword .....               |  | 3           |
| Introduction .....           |  | 4           |
| <b>1</b>                     | <b>Scope .....</b>   | <b>4</b>    |
| <b>2</b>                     | <b>Normative references .....</b>  | <b>4</b>    |
| <b>3</b>                     | <b>Terms and definitions .....</b>   | <b>5</b>    |
| <b>4</b>                     | <b>General .....</b>   | <b>5</b>    |
| <b>5</b>                     | <b>Materials .....</b>   | <b>5</b>    |
| <b>6</b>                     | <b>Corrosive medium .....</b>  | <b>6</b>    |
| <b>7</b>                     | <b>Procedure .....</b>   | <b>6</b>    |
| <b>8</b>                     | <b>Evaluation of results .....</b>   | <b>8</b>    |
| <b>8.1</b>                   | <b>Changes in mass .....</b>   | <b>8</b>    |
| <b>8.1.1</b>                 | <b>Loss in mass .....</b>  | <b>8</b>    |
| <b>8.1.2</b>                 | <b>Gain in mass .....</b>  | <b>8</b>    |
| <b>8.2</b>                   | <b>Surface changes .....</b>   | <b>9</b>    |
| <b>8.3</b>                   | <b>Depth of attack .....</b>   | <b>9</b>    |
| <b>8.4</b>                   | <b>Changes in microstructure .....</b>   | <b>9</b>    |
| <b>8.5</b>                   | <b>Changes in mechanical properties .....</b>  | <b>9</b>    |
| <b>8.6</b>                   | <b>Corrosion products .....</b>  | <b>9</b>    |
| <b>8.7</b>                   | <b>Changes in the corrosive medium .....</b>   | <b>9</b>    |
| <b>Annex A (informative)</b> | <b>Overview of standards and other documents on corrosion testing and investigations .....</b> | <b>10</b>   |
| <b>A.1</b>                   | <b>Main types of corrosion test .....</b>  | <b>10</b>   |
| <b>A.2</b>                   | <b>General corrosion tests .....</b>   | <b>10</b>   |
| <b>A.3</b>                   | <b>Corrosion testing of ferrous materials .....</b>  | <b>10</b>   |
| <b>A.4</b>                   | <b>Corrosion testing of aluminium .....</b>  | <b>11</b>   |
| <b>A.5</b>                   | <b>Corrosion testing of copper .....</b>   | <b>11</b>   |
| <b>A.6</b>                   | <b>Corrosion testing of nickel .....</b>   | <b>11</b>   |
| <b>A.7</b>                   | <b>Testing of non-organic coatings .....</b>   | <b>11</b>   |
| <b>A.8</b>                   | <b>General aspects of testing corrosion .....</b>  | <b>12</b>   |