

ISO 20144:2019 (E)

Fibre-reinforced plastic composites — Standard qualification plan (SQP) for composite materials, including reduced qualification plan (RQP) and extended qualification plan (EQP) schemes

Contents

| | |
|---------|--|
| | Foreword |
| | Introduction |
| 1 | Scope |
| 2 | Normative references |
| 3 | Terms and definitions |
| 4 | Principle |
| 5 | Test methods and specimen conditioning |
| 6 | Test matrices and specimen sampling |
| 7 | Apparatus |
| 8 | Test plate preparation and specimen machining |
| 9 | Test requirements |
| 9.1 | Standard qualification plan |
| 9.2 | Extended qualification plan |
| 9.3 | Reduced qualification plan |
| 10 | Presentation of results — Standardized data sheets |
| 11 | Statistical analysis |
| 12 | Precision |
| 13 | Test report |
| Annex A | (normative) Report sheets |
| Annex B | (normative) Determination of statistical parameters |
| B.1 | General |
| B.2 | Validity and consistency of failure modes |
| B.3 | Investigation and removal of bad data |
| B.4 | Quantity of data |
| B.5 | Test for outliers within each batch |
| B.6 | Treatment of outliers detected by maximum normal residual (MNR) method |
| B.7 | Test for between batch variability |
| B.8 | Dealing with between batch variability |
| B.9 | Test for outliers within pooled single data set |
| B.10 | Calculation of observed significance level (OSL) for normal distribution of data |
| B.11 | Calculation of B-basis value for normal distribution |
| B.12 | Calculation of B-basis value for a two-parameter Weibull distribution |
| B.13 | Calculation of B-basis value for lognormal distribution |