

ISO 15114:2014-05 (E)

Fibre-reinforced plastic composites - Determination of the mode II fracture resistance for unidirectionally reinforced materials using the calibrated end-loaded split (C-ELS) test and an effective crack length approach

Contents

| | Page |
|--|------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Symbols and abbreviated terms | 1 |
| 4 Principle | 2 |
| 5 Apparatus | 2 |
| 6 Specimens | 4 |
| 6.1 Preparation of specimens | 4 |
| 6.2 The initial defect | 4 |
| 6.3 Attaching the load-block to the specimen | 4 |
| 6.4 Moisture conditioning | 5 |
| 6.5 Final specimen preparation and measuring dimensions | 5 |
| 6.6 Number of specimens | 6 |
| 7 Procedure | 6 |
| 7.1 Performing the calibration of the ELS fixture | 6 |
| 7.2 Pre-cracking the specimens | 7 |
| 7.3 Testing the samples in mode II from the precrack formed in 7.2 | 8 |
| 8 Data analysis | 8 |
| 8.1 The points for data analysis | 8 |
| 8.2 Determination of the ELS clamp correction | 10 |
| 8.3 Determination of GIIC values | 11 |
| 9 Precision | 13 |
| 10 Test report | 14 |
| Annex A (informative) Large displacement and load-block correction factors | 16 |
| Bibliography | 18 |