DIN ISO 15654:2011-10 (E)

Fatigue test method for transmission precision roller chains (ISO 15654:2004)

Contents

Page

National foreword 3

National Annex NA (informative) 4

1 Scope 6

2 Normative references 6

3 Symbols 7

4 Principle 8

5 Apparatus 8
5.1 Testing machine 8
5.2 Test fixtures 9

6 Test specimens 9

7 Test procedure 9
7.1 Test forces 9
7.2 Conformity test 11
7.3 Staircase test 12

8 Staircase test data analysis 13
8.1 Data 13
8.2 Plotting staircase data 13
8.3 Statistical calculations 14

9 Report of test results 14
9.1 Test chain information 14
9.2 Test equipment and procedures 14
9.3 Test results for conformity and staircase tests 15

Annex A (informative) Survival test with abridged Probit analysis 16

Annex B (informative) Combined test method 20

Annex C (informative) Justification for adding one step to fatigue limit in staircase analysis 26

Annex D (informative) Adding an additional "phantom" point at the end of staircase test 29

Annex E (informative) Reporting fatigue test results 30

Annex F (informative) Establishing chain application fatigue ratings 37

Annex G (informative) Extrapolating fatigue strength from 3 106 cycles to 107 cycles 43

Annex H (informative) Finite life testing and data analysis 47

Bibliography 52