INTERNATIONAL STANDARD



First edition 2004-05-01

Fatigue test method for transmission precision roller chains

Méthode d'essai de fatigue pour chaînes de transmission de précision à rouleaux



Reference number ISO 15654:2004(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview denerated by FUS

© ISO 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office Case postale 56 • CH-1211 Geneva 20 Tel. + 41 22 749 01 11 Fax + 41 22 749 09 47 E-mail copyright@iso.org Web www.iso.org Published in Switzerland

Contents

Forewo	ord	iv
1	Scope	1
2	Normative references	1
3	Symbols	2
4	Principle .	
5 5.1	Apparatus	3
5.2	Test fixtures	4
6	Test specimens	4
7 7.1 7.2	Apparatus Testing machine Test fixtures Test specimens Test procedure Test forces Conformity test	
7.3	Staircase test	7
8	Staircase test data analysis	8
8.1 8.2	Plotting staircase data	8 8
8.3	Statistical calculations	9
9.3	Plotting staircase data Statistical calculations Report of test results Test chain information Test equipment and procedures Test results for conformity and staircase tests	. 10
Annex	A (informative) Survival test with abridged Problemalysis	. 11
Annex	B (informative) Combined test method	. 15
Annex	C (informative) Justification for adding one step to fatigue limit in staircase analysis	. 21
	D (informative) Adding an additional "phantom" point a phane end of staircase test	
Annex	E (informative) Reporting fatigue test results	. 25
Annex	F (informative) Establishing chain application fatigue ratings	. 32
Annex	G (informative) Extrapolating fatigue strength from 3 × 10 ⁶ cycles to 10 ⁷ cycles	. 38
Annex	H (informative) Finite life testing and data analysis	. 42
Bibliog	raphy	. 47
	\mathcal{O}	

Foreword

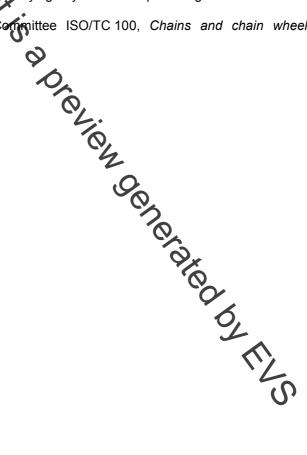
ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in Maison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15654 was prepared by Technical Committee ISO/TC 100, Chains and chain wheels for power transmission and conveyors.



Fatigue test method for transmission precision roller chains

1 Scope

This International Standard specifies an axial force fatigue test method for transmission roller chains, the tests And the number of the being of the fluctuating tension type, carried out at room temperature in air, with the force applied along the longitudinal axis of the chain. It also specifies procedures for statistically analyzing the test results and gives

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced

ISO 606, Short-pitch transmission precision roller and bush chains, attachments and associated chain

© ISO 2004 – All rights reserved