
Calculation of load capacity of bevel gears —

Part 2: Calculation of surface durability (pitting)

Calcul de la capacité de charge des engrenages coniques —

*Partie 2: Calcul de la résistance à la pression superficielle (formation
des piquûres)*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2014

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested 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

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Symbols, units and abbreviated terms	2
5 Pitting damage — General aspects	3
5.1 Acceptable versus unacceptable pitting.....	3
5.2 Assessment requirements.....	3
5.3 General rating procedure.....	4
6 Gear flank rating formulae — Method B1	4
6.1 Contact stress formula.....	4
6.2 Permissible contact stress.....	6
6.3 Calculated safety factor for contact stress.....	6
6.4 Contact stress factors.....	6
6.5 Permissible contact stress factors.....	10
7 Gear flank rating formulae — Method B2	13
7.1 Contact stress formula.....	13
7.2 Permissible contact stress.....	14
7.3 Calculated safety factor for contact stress.....	14
7.4 Contact stress factors.....	15
8 Factors for contact stress and permissible contact stress common for method B1 and method B2	20
8.1 Elasticity factor, Z_E	20
8.2 Lubricant film influence factors, Z_L , Z_V , Z_R	20
8.3 Work hardening factor, Z_W	24
8.4 Life factor, Z_{NT}	25
Annex A (informative) Bevel slip factor Z_S — Method B1	28
Bibliography	30