

AdoreQS Updates

Contact Information

Please direct all inquiries and technical questions related to AdoreQS to:

Dr. Pradeep K. Gupta

PKG Inc

Email: guptap@PradeepKGuptaInc.com

To ensure proper routing of your email ***please include the word “AdoreQS” in the subject of the email.***

Comments on any identified error and/or suggestions for future enhancement of AdoreQS will be greatly appreciated.

Presently, since downloads of AdoreQS and the related users are not automatically tracked, please send an email to the above contact if you wish to be notified about availability of future update to AdoreQS.

Current Release

Version 8.50 – Release Date: 06Jul20

Code Corrections

1. A minor error related to computation to effective pressure-viscosity coefficient for the updated MIL-L-23699 lubricant (model code kTrac=11) was identified after release of version 8.10. This error has been corrected in version 8.50. The correction results in a small change in lubricant film thickness and the related traction coefficient.

Code Enhancements

1. The computed rolling element excursion is added to the output.
2. The output for rolling element to race interaction is also modified to include the computed shear thinning factor.
3. The redundant output for lubricant film thickness, which is already printed in the paragraph above in terms of isothermal film thickness and the thermal reduction factor, is eliminated.
4. The input data for the lubricant and the related traction model is enhanced. Some of key references on the basis of which the lubricant viscosity and traction modeling are carried out are also listed for information of the user.
5. As a part of a continuing effort to enhance the lubricant data base in ADORE a number of lubricant, for which the viscosity data became available recently, are added to the lubricant data base. This resulted in expansion of the list of input traction model code, kTrac.

6. The optional user specified traction model ($k_{Trac} = 9$) is now restricted to the simplified traction model based on empirical constitutive coefficients computed by regression analysis to optimize the fit between model predictions and experimental traction data.

Other Comments

Please note that the visco-elastic traction models for the Mil-L-7808 and MiL-L-23699 are based on very limited experimental traction data and constant values of empirical estimates of the required constitutive coefficients in the model. Therefore, use of these models in practical applications is somewhat limited. Presently, the models are under more extensive evaluation.

Version 8.10 - Release Date: 16Mar20

AdoreQS 8.10 was the initial version. Code modules, corresponding to quasi-static equilibrium and the related input data, were extracted from the parent code ADORE and packaged into stand-alone application AdoreQS.