Letters to the Editor

"SPIROID®" Used Incorrectly

Dear Editor:

David Dooner's article, "Design Formulas for Evaluating Contact Stress in Generalized Gear Pairs," which appeared in the May/June 2001 issue, uses "spiroid" in a generic and/or misleading sense to refer to a specific type of gear form.

In fact, the term "SPIROID®" is a registered trademark owned by Illinois Tool Works (ITW). ITW has rights in the trademark "SPIROID®" dating back to 1956 for skew axis gearing and machines for lapping and testing reduction gearing incorporating a tapered worm and face worm gear. Under the law, ITW (and its ITW Spiroid division) have the exclusive right to use the mark "SPIROID®" in connection with these goods and related goods.

Moreover, the gears referred to in the article as "spiroid" are not true "SPIROID®" gears. The author incorrectly refers to a SPIROID® gear pair as "a hypoid gear pair with high spiral angle." SPIROID® gears are unique gears and do not have the same geometry as hypoid gears. A major advantage of SPIROID® gears is that multiple teeth are in contact throughout mesh. Typically about 10% of the SPIROID® gear teeth are in contact. Also, the article does not give complete design parameters, but a 47.80° normal pressure angle is extremely high for SPIROID® gears, which further indicates that the gear pair in the article is not representative of SPIROID® gears.

By using the word "spiroid" in a generic sense, the article gives a very misleading representation and an inaccurate analysis of the contact stress levels of "SPIROID®" gears compared with other gear forms. Many years of field service have proven that SPIROID® gears will handle greater loads than spur, helical, hypoid or bevel gears of comparable size, yet the article claims just the opposite. One reason may be that the author's calculations don't consider multiple tooth contact, which is an important contributor to the load-carrying capacity of SPIROID® gears.

The main point is that the example used in the article was not a SPIROID® gear, offered exclusively by ITW Spiroid, and therefore did not give an accurate description of SPIROID® design or features. SPIROID® gears provide very high power density and have many other performance benefits over other gear forms.

Sincerely,
James Honan
Vice President & General Manager
ITW Spiroid

KISSsoft Remains *KISSsoft*

Dear Editor:

With a certain astonishment, I've read news on your home page (which is a jewel among the other stuff on the World Wide Web, by the way) telling me that our gear and engineering software, *KISSsoft-Hirnware*, has changed its name. Since we are currently building up a market in the United States for our product, it is essential to correct some things, so I'd like to clarify the following points:

1) Hornet GmbH, the company featured in the announcement I read, has no rights to the *KISSsoft* name. They were using the software for some engineering purposes and planned to sell it under a different name, combined with a specialized material database.

2) *KISSsoft-Hirnware* will remain *KISSsoft-Hirnware*, whatever happens. The name *KISSsoft* is derived from the name L. Kissling & Co. AG, the Swiss gear manufacturing company that started programming the software in the early '80s. Since 1998, KISSsoft AG has owned all the rights to the software and has improved it together with our partner, Hirn Verzahnungen, whose software *Hirnware* was integrated into *KISSsoft* in 1999, resulting in *KISSsoft-Hirnware*. That is complicated enough, so we do not plan to change the name into something else.

3) There are many changes in the May 2001 release of *KISSsoft-Hirnware*. For example, the graphical shaft generator was improved, the gear calculation was extended (that was a hard job, since it was already very extensive), and the new version of *KISSsys* is now available for testing purposes. *KISSsys* gives the engineer the ability to look at a whole system of machine elements (e.g., a whole gearbox) and to perform strength analysis and related calculations on the complete system, certain variants of the system or a single machine element.

The new demo version of *KISSsoft-Hirnware* is available on the Internet at *www.KISSsoft.ch/english/demo.htm* and a test version of the *KISSsys* can be ordered by e-mail at *info@KISSsoft.ch*.

Kind regards,
Stefan Beermann, Marketing Director
KISSsoft AG
Frauwis 1
CH-8634 Hombrechtikon
Switzerland

Editors' Note: NORA is the name of an engineering service offered by Hornet GmbH. The company uses KISSsoft-Hirnware and other software to teach people how to develop new products. We apologize for any confusion.

Tell Us What You Think . . .
If you would like to respond to this or any other article in this edition of *Gear Technology*, please fax your response to the attention of Randy Stott, managing editor, at 847-437-6618.