The gear hobbing process is a generating type of production operation. For this reason, the form of the hob tooth is always different from the form of the tooth that it produces. For example, an involute form of gear tooth is produced by a hob having angular straight sides. A straight-sided spline tooth is produced by a hob having a curved tooth shape. The amount of fillet radius that a hob will produce is normally different from the radius on the tip of the hob.

It is not necessary for users of hobs to be students of hob generation or to delve deeply into the complexities of such studies. They can specify on the drawing what is desired on a particular gear, spline or special tooth form, and the hob manufacturer can develop the tool.

The following illustrations of hob teeth and produced forms are given to aid hob users in understanding the basic relationships between hob and produced part.
The worth of any new technology can be best determined by its acceptance in the marketplace. It is apparent that by having the skiving hob available, more and more uses are being found for this bridge between the extremely accurate ground gears, and those that had previously been ground only because there was no way to correct distortions, even though an AGMA class 8 to 10 gear would be acceptable. The technology has thus advanced from one of being essentially a 'pre-grind technology' to one that now encompasses also "finishing of hard gears by skiving".

This article was reprinted from the American Gear Manufacturers Association, Technical Paper.

E-1 ON READER REPLY CARD

NAME YOUR CUT!

No matter how you cut it; keyway, slot, serration, special form...any internal configuration...no one has a Keyseater like Mitts & Merrill. With 90 years of experience behind every piece of precision machinery, our engineers can recommend the right Keyseater that will give you both economy, and long service-life. Cut it with the best.

MANUFACTURED BY CARTHAGE MACHINE COMPANY, INC.

Mitts & Merrill Keyseaters

Dept. GT-9, P.O. Box 151, Carthage, NY 13619 (315) 493-2380 Telex 937-378