

TILT

SYSTEMS, STRATEGIES & RESEARCH FOR LUBRICATION PROFESSIONALS

Spotlight on:

Metalworking Fluids

- Selecting the 'perfect' MWF
- The potential of dry machining
- Q&A: Chair of OSHA's MWF Standards Advisory Committee
- Mycobacteria case study
- Formulating metal-removal fluids
- Sounding Board: Your most difficult MWF challenges
- Misty? No more!

TLT Special MWF Section

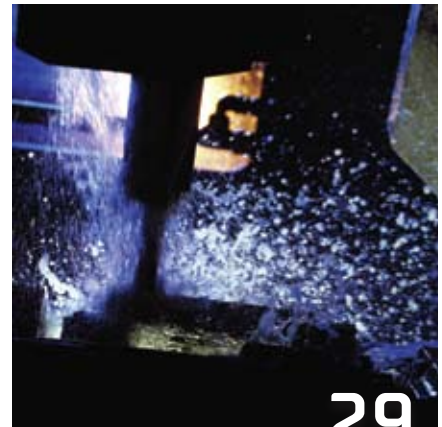
From mist contamination to metal-forming fluids, we examine the basic principles of metalworking fluids in seven information-packed articles.

BEST PRACTICES

29 **Selecting the 'perfect' metalworking fluid**

In addition to fully understanding the operating conditions, be sure to question all assumptions about MWFs. Many of them are the tribological equivalent of old fairy tales.

By Jerry P. Byers, CMFS



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40 **The possibilities and limitations of dry machining**

Dry and near-dry machining won't replace traditional metalworking fluid technology anytime soon, but they do offer advantages for some niche markets.

By Dr. Neil Canter

46 **20 Minutes With ... Dr. Maura Sheehan**

She chaired the OSHA committee responsible for a landmark study on MWFs and offers a 13-point plan for improving industrial health and safety.

By Thomas T. Astone



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CASE STUDY

52 **Relationship between the presence of mycobacteria and non-bacteria in metalworking fluids**

Researchers investigate test samples to get a better understanding of the microbial population in MWF.

By Drs. Frederick J. Passman, Katalin Rossmore & Leonard Rossmore

56 **Challenges in formulating metal-forming fluids**

Developing metal-forming fluids for specific applications and increasing manufacturing productivity are just some of the problems facing lubricant suppliers.

By Dr. Neil Canter



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64 **Sounding Board**

The most difficult MWF challenges. Readers speak out.

LUBRICATION FUNDAMENTALS

69 **I get misty ... no more!**

Controlling mist contamination is a top priority for metalworking fluid managers in protecting the environment of their operations.

By Dr. Robert M. Gresham