

CIMCOOL[®]

Technical Report

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CONTAMINATION OF METALWORKING FLUIDS

- **Oils**
- **Rags**
- **Clothing**
- **Orange Peel**
- **Sandwiches**
- **Greases**
- **Metal Cleaners**
- **Phosphate**
- **Soap**
- **Various Metal Salts**
- **Cigarettes**
- **Dead Rodents**
- **Floor Cleaner**
- **Plating Chemicals**
- **Solvents**
- **Paper**
- **Milk Cartons and Cups**
- **Chromates**

These are typical items frequently discovered in metalworking fluids. These contaminants are not put there by the fluid manufacturer but get in during use, through mishandling, or through poor maintenance and cleaning procedures in the plant environment.

One or more of the items can get into the fluid from the parts being machined or ground, others from leaks in the machines. Cleaners are sometimes used to clean machines and may be added in excess or spilled into the metalworking fluid.

To some users, the sump on the machine tool, or the flume on the central coolant system becomes a convenient spot to discard some of the items listed above. Things that should be thrown in the trash are thrown into the metalworking fluid. Liquids that should be disposed of by normal plant procedures are dumped into the coolant

The performance of the metalworking fluid can be adversely effected by this contamination in many ways. Low foaming fluids are suddenly covered with a massive layer of foam. Clean, pleasant smelling fluids quickly go rancid. Mixes that are normally non-irritating may begin producing cases of Dermatitis. Unsightly residues start forming on machine parts.

Remember, when using a metalworking fluid, **KEEP IT CLEAN.** Operators, maintenance persons, janitors, and anyone working around the metalworking fluid are all responsible for keeping out contaminants. ■