

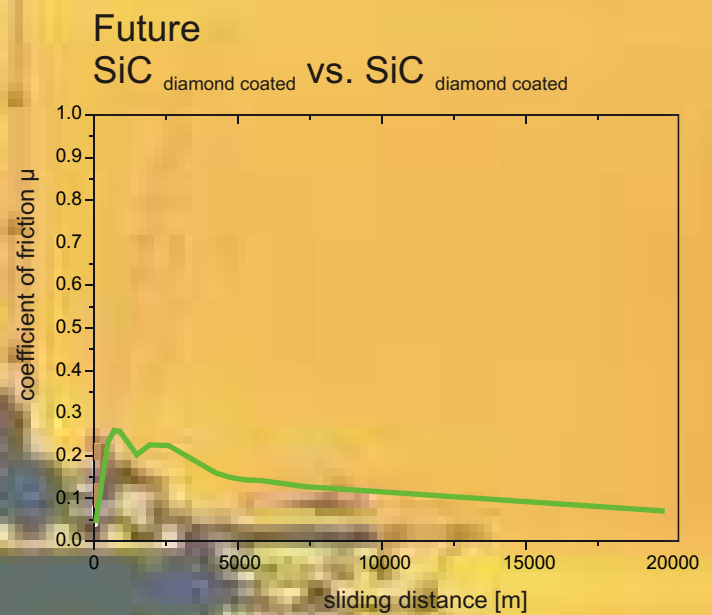
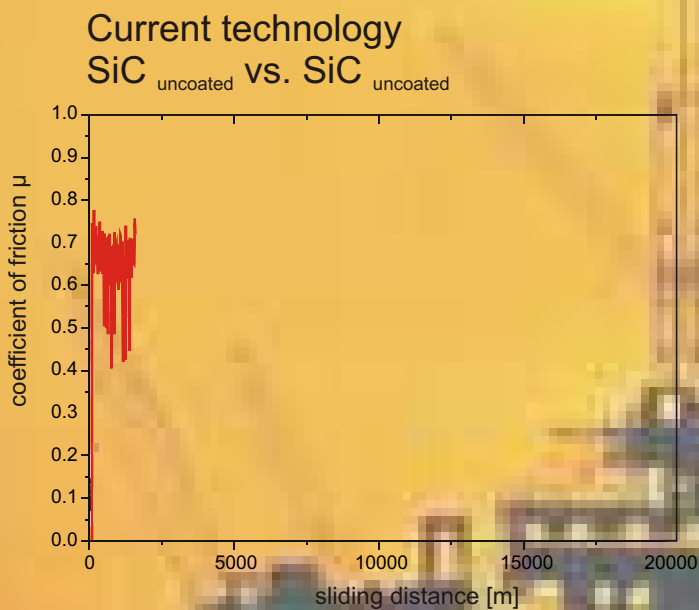


Diamant für extreme Beanspruchungen

Dry running (without lubricant) presents a major problem for modern industry. Pumping, conveyor and mixing equipment are particularly affected. The problem is further complicated by the requirement that equipment should be resistant to chemical attack. Hard coatings are widely available for such applications. How-

ever wear-free dry running over a long period of time hasn't been realised yet. Diamond coatings make dry running possible with chemical inertness and guarantee excellent emergency running qualities as well as prevention of contamination of the product by wear debris.

### Comparison of uncoated and diamond coated SiC-bearings under dry running conditions



- high coefficient of friction,  $\mu > 0,6$
- high generation of heat, thus inefficient
- high frequency squeaking and vibration
- catastrophic failure after short time

- low coefficient of friction,  $\mu < 0,2$
- little generation of heat
- quiet running characteristics
- high emergency reserve under dry running conditions

➔ poor or no emergency running qualities

➔ superb emergency running qualities



catastrophic failure of uncoated SiC-bearings during dry running



diamond coated SiC-bearing after 20,000m dry running, the surface is merely polished