

Roller-on-Disk Geometry for extreme pressure gear oils

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Abstract:

The new roller-on-disk geometry as per DIN 51834, part 4, (ASTM homologue is pending) retains in comparison to the ball-on-disk geometry better over test time the initial contact pressure. It can be applied for a quick and cost-effective, application-oriented screening method of gear lubricants. This procedure operated so far at 98°C consists of a load step extreme pressure test and a friction and wear evaluation using the last load step before adhesive failure (scuffing), that is able to give complementary information to established gear oil tests by measuring the coefficient of friction, wear scar and load carrying capacity.

Bio:

Dr. Mathias Woydt is managing director of MATRILUB Materials | Tribology | Lubrication, with more than 33 years of experience in R&D of ceramics, ceramic composites, thin film coatings and thermally sprayed coatings, abrasive wear as well as lubricant formulations, environmentally acceptable lubricants and in tribo-testing including their dissemination into industrial applications, more than 280 publications and 51 priority patents filed. He is chairman of the SRV test methods DIN 51834, parts 1-4, nine ASTM test methods and ISO19291.

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