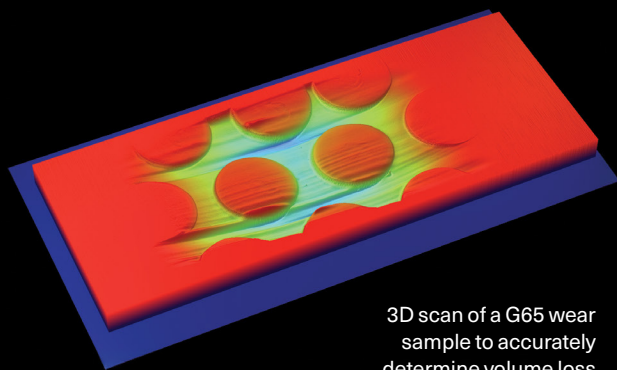


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3D scan of a G65 wear sample to accurately determine volume loss on brazed carbide tile bearing overlay



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Committee G02 Tribology of Solid Materials

Helping Our World Work Better®



The scope of the Committee shall be the promotion of knowledge, stimulation of research, formulation of terminology, guides, practices, and development of standard methods of testing and data analysis. The activities relate to tribology of solid materials: wear, friction, and erosion, which may include forms of surface damage of materials and structures.

The areas of interest of the Committee shall be the response of solids to mechanical interactions that occur due to relative motion between a solid material and a contacting substance or substances. This includes surface-to-surface or particle-to-surface sliding or rubbing, flow of fluids or slurries, impingement by liquid jets, drops, or solid particles, and cavitation of contacting liquids. These phenomena sometimes coexist, interact, or overlap with somewhat related phenomena, such as corrosion or lubrication. Where applicable and appropriate, the work of the Committee will be coordinated with other ASTM committees and other organizations having mutual interests, including ASTM Committees G01 on Corrosion of Metals and D02 on Petroleum Products and Lubricants, ASMI, ASME, SAE, STLE, ISO, and others.

Subcommittees

G02.10 EROSION BY SOLIDS AND LIQUIDS

G32 – Standard Test Method for Cavitation Erosion Using Vibratory Apparatus

G73 – Standard Test Method for Liquid Impingement Erosion Using Rotating Apparatus

G76 – Standard Test Method for Conducting Erosion Tests by Solid Particle Impingement Using Gas Jets

G134 – Standard Test Method for Erosion of Solid Materials by Cavitating Liquid Jet

G211 – Standard Test Method for Conducting Elevated Temperature Erosion Tests by Solid Particle Impingement Using Gas Jets

G02.30 ABRASIVE WEAR

B611 – Standard Test Method for Determining the High Stress Abrasion Resistance of Hard Materials

G56 – Standard Test Method for Abrasiveness of Ink-Impregnated Fabric Printer Ribbons and Other Web Materials [Side Note: Currently under revision]

G65 – Standard Test Method for Measuring Abrasion Using the Dry Sand/Rubber Wheel Apparatus

G75 – Standard Test Method for Determination of Slurry Abrasivity (Miller Number) and Slurry Abrasion Response of Materials (SAR Number)

G81 – Standard Test Method for Jaw Crusher Gouging Abrasion Test

G105 – Standard Test Method for Conducting Wet Sand/Rubber Wheel Abrasion Tests

G132 – Standard Test Method for Pin Abrasion Testing

G171 – Standard Test Method for Scratch Hardness of Materials Using a Diamond Stylus

G174 – Standard Test Method for Measuring Abrasion Resistance of Materials by Abrasive Loop Contact

G195 – Standard Guide for Conducting Wear Tests Using a Rotary Platform Abraser

G02.40 NON-ABRASIVE WEAR

G77 – Standard Test Method for Ranking Resistance of Materials to Sliding Wear Using Block-on-Ring Wear Test

G98 – Standard Test Method for Galling Resistance of Materials

G99 – Standard Test Method for Wear Testing with a Pin-on-Disk Apparatus

G119 – Standard Guide for Determining Synergism Between Wear and Corrosion

G133 – Standard Test Method for Linearly Reciprocating Ball-on-Flat Sliding Wear

G137 – Standard Test Method for Ranking Resistance of Plastic Materials to Sliding Wear Using a Block-On-Ring Configuration

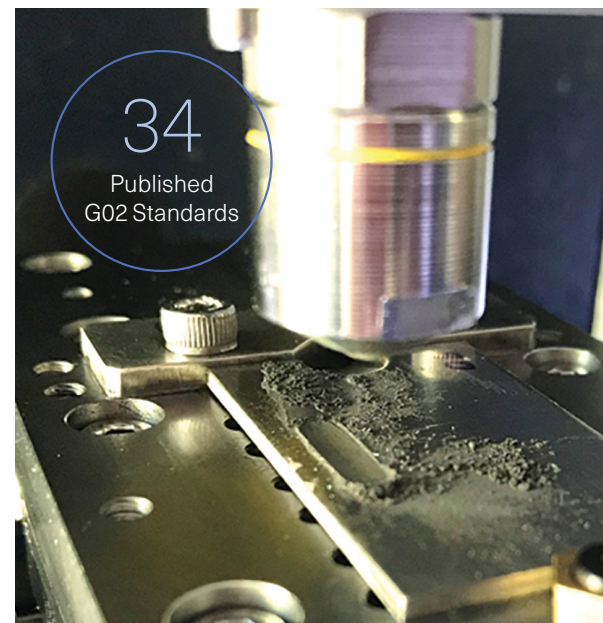
G176 – Standard Test Method for Ranking Resistance of Plastics to Sliding Wear Using Block-on-Ring Wear Test–Cumulative Wear Method

G196 – Standard Test Method for Galling Resistance of Material Couples

G204 – Standard Test Method for Damage to Contacting Solid Surfaces under Fretting Conditions

G206 – Standard Guide for Measuring the Wear Volumes of Piston Ring Segments Run against Flat Coupons in Reciprocating Wear Tests

G223 – Standard Test Method for Measuring Friction and Adhesive Wear Properties of Lubricated and Nonlubricated Materials Using the Twist Compression Test (TCT)



Wear track from the G133 wear test

G02.50 FRICTION

G115 – Standard Guide for Measuring and Reporting Friction Coefficients

G143 – Standard Test Method for Measurement of Web/Roller Friction Characteristics

G164 – Standard Test Method for Determination of Surface Lubrication on Flexible Webs

G181 – Standard Test Method for Conducting Friction Tests of Piston Ring and Cylinder Liner Materials Under Lubricated Conditions

G182 – Standard Test Method for Determination of the Breakaway Friction Characteristics of Rolling Element Bearings

G194 – Standard Test Method for Measuring Rolling Friction Characteristics of a Spherical Shape on a Flat Horizontal Plane

G203 – Standard Guide for Determining Friction Energy Dissipation in Reciprocating Tribosystems

G219 – Standard Guide for Determination of Static Coefficient of Friction of Test Couples Using an Inclined Plane Testing Device

G02.91 TERMINOLOGY

G40 – Standard Terminology Relating to Wear and Erosion