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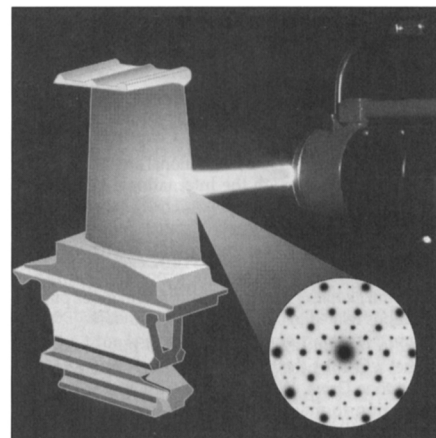
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ON THE COVER: Quasicrystals are being developed as surface coatings to deliver properties such as lower adhesion than metallic alloys, wear resistance, reduced friction, and thermal insulation. Shown here is a plasma-arc-spray gun (right) used in the Ames Laboratory Plasma Spray Facility to process gas-atomized powders into high-velocity, molten droplets that strike a surface to form a coating. Thermal-barrier quasicrystal coatings have been deposited onto aircraft-engine components within the framework of the European Brite-Euram program and have been successfully tested for extended times at 1000°C (*Industries et Techniques*, Paris, July 1997 issue). The inset (bottom right) selected-area-diffraction pattern (SADP) is the first observed 10-fold diffraction pattern from an icosahedral particle. More information regarding the discovery of quasicrystals and their potential use as surface coatings appears in the feature articles of this issue of *MRS Bulletin*. For more information on the SADP, see "Quasiperiodic Materials: Discovery and Recent Developments" by Dan Shechtman and Candace I. Lang on p. 40.

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