

Water Droplet Erosion Tester

Rain Drop Erosion • Leading Edge Erosion

Repetitive liquid drop impact on materials can cause severe wear. This type of wear is frequently seen on leading edges of surfaces that operate at high speeds in rain or other environments where water droplets may be present.

About the Water Droplet Erosion Tester

Repeated exposure to high velocity water droplets can be a very destructive phenomenon. High impact pressures can lead to shear waves and lateral jetting. Repetitive water droplet impacts on components can affect performance and efficiency due to increased surface undulations, craters and other surface and component failures under extreme conditions.

The Water Droplet Erosion Tester (WDE) is designed to simulate liquid-solid erosion and failure mechanisms of materials used in wind turbines, airplanes, helicopter blades and fighter jets.

UNIQUE DROPLET GENERATOR

Traditional water droplet erosion testers are huge, expensive and inherently dangerous pieces of equipment. Our unique droplet generator design makes it possible to now study the droplet erosion in a compact, convenient and cost effective tester. Users can conveniently change impact frequency, impact velocity, stand off distance and droplet size in a matter of minutes.

ADJUSTABLE SAMPLE STAGE

The adjustable, corrosion resistant stage provides users with the flexibility to place the test specimens at an angle of their choosing. The sample stage can easily accommodate small or large samples. When using large samples, the stage can be adjusted to allow areas of small overlaps or no overlap. The stage can also be adjusted to vary angles of impact to study the isolated effects of impact angles on material or coating failures.

