



ADVANCED TECHNOLOGY FOR ENVIRONMENTAL SIMULATION OF HIGH VELOCITY BLOWING SAND

Presented by:

Daniel Lehman, president

AIR DYNAMICS INDUSTRIAL SYSTEMS CORPORATION

dlehman@airdynamics.net



SIMULATING DESERT ENVIRONMENTS

- **Need emphasized during Operation Desert Storm**
- **Specialized equipment testing for U.S. military, manufacturers**
- **Numerous testing applications: military, automotive, wind turbine, solar panel, aerospace**

CURRENT STATE OF THE ART HIGH VELOCITY BLOWING SAND

Where we are today:

- **High velocity test cabinet**
- **High velocity test duration**
- **High velocity air and material flow**
- **Spent material & test cabinet size relationship**
- **Test repeatability and predictive analysis**

PREPARING FOR THE FUTURE BY TESTING TODAY

Where we're headed:

- **High Velocity Blowing (HVB) sand test chamber applications**
- **HVB sand chamber – coupon vs. full size test specimen**
- **HVB sand chamber - static vs. dynamic specimen testing**
- **Test chamber repeatability – reduction of variables**
- **Test chamber data collection and predictive analysis**

BLOWING SAND TEST CHAMBER REQUIREMENTS

Advanced technology:

- **Environmental air pollution**
- **Indoor pollution – industrial hygiene**
- **Material handling – system charging & removal of spent material**
- **Non-destructive design**
- **Commercially available components & subassemblies**



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