



HB ENGINEERING, INC.

IN-HOUSE ANALYTICAL SERVICES

HB Engineering performs the following analytical methods to evaluate the required Department of Transportation shipping classification for aluminum processing baghouse dust and other solid materials.

Dangerous When Wet Testing

The testing is performed in accordance with *UN Test Methods and Criteria Relating to Class 4, Division 4.3, Substances which in contact with water emit flammable gases.*

This test method determines if a substance, which in contact with water emits flammable gases. This test consists of a series of tests to determine if gas is evolved and if spontaneous ignition of gas occurs. Testing includes measuring the rate of gas evolution of three samples over a minimum of 7 hours. If the flammability of the gas is unknown, we have the capabilities to collect a gas sample for composition analysis.



Ignitability of Solids Testing

The testing is performed in accordance with *UN Test Methods and Criteria Relating to Class 4, Division 4.1, Flammable solids* and *EPA Method 1030 Ignitability of Solids.*

An initial preliminary test is performed to see if the material ignites or will propagate combustion along a train of material. Materials that propagate burning are evaluated further using the burning rate test.



Rate of gas evolution test setup