ADS – AUTOMATIC DUST SAMPLER
EASY SAMPLING FOR LABORATORY TESTS

- The ADS is an instrument for automatic and isokinetic sampling of ash in the flue gas duct from boilers.
- The ADS takes a sample with average properties of the ash over the sampling period.
- The ADS nozzle permits adjusting of the suction for obtaining isokinetic sampling.
PRINCIPLES OF OPERATION

The ADS is designed to collect dust samples from flue gas and should be permanently fitted at a suitable position on the flue gas duct.

GENERAL DESCRIPTION

The ADS consists essentially of a heated miniature cyclone through which a sample of flue gas is continuously drawn by an ejector, operated by the suction in the flue itself. A detachable glass container, secured to the bottom of the cyclone, receives the dust, which is separated out. It builds up in layers so that it is quite easy for the boiler operator to observe the rate accumulation and to make notes of any perceptible change in colour of the ash e.g. due to carry-over of unburned carbon.

Once the ADS is set for isokinetic sampling of dust from a suitable selected point in the gas stream, it continues to operate isokinetically. It operates with a suction velocity at the nozzle equal to gas velocity past it, irrespective of variations in the main gas flow resulting from adjustment of flue gas suction.

All the components of the apparatus are mounted on a stainless steel base plate. The base plate is fitted to the mounting flange, which is welded to the flue duct. The sampling probe can also be rotated to any position to suit the direction of flow and is locked with locking nuts.

TECHNICAL SPECIFICATION

- **Efficiency rate:** Approx. 99%
- **Max. gas temperature:** 370 °C
- **Min. flue suction:** 250 Pa
- **Power supply:** 230V/50Hz or as required
- **Power consumption:** 100 W
- **Standard nozzle size:** 5/8” / 15.9 mm
- **Max. length of sampling probe:** 1500 mm
- **Weight:** 15 kg
- **Material:**
  - Sampling probe: Stainless steel
  - Bas plate: Stainless steel

DRAWING

COMPANY PROFILE

M&W Asketeknik is an internationally working engineering company specialised in design, manufacture and supply of analysing and sampling systems for optimising processes and controlling by-products in coal and biofuel fired power plants and other utility boilers. Several hundred units are successfully analysing and monitoring combustion processes in power stations world-wide.