

**Moisture Control in Engine Testing Room**

Engine Testing Room is a facility to develop and test the engines of automobiles. High humidity can affect the engine testing facility operations.

**Effects of Uncontrolled Humidity**

Uncontrolled temperature and humidity can affect:

- Functioning of sensors and measurement tools
- Health hazards

**Causes of Uncontrolled Humidity**

The automobile engines emits NO, NO<sub>2</sub>, N<sub>2</sub>O<sub>4</sub>, SO<sub>2</sub>, CO, CO<sub>2</sub> and residual hydrocarbons. Considering the health hazards that these gases can cause it is necessary to identify and quantify these emissions. Engine Testing Rooms are designed to cater to this segment.

However assuaging the exact figures of these emissions becomes a difficult task when external agents like temperature and humidity come into play. These hinder the operation of the sensors installed for measurement of discharges. Under such conditions the figures observed are often not accurate.

The accuracy of test results is often hindered because of temperature and humidity.

**General Recommendations**

The dew point of the chambers where the testing is done is maintained at -30°C.

**Bry-Air Solutions**

Bry-Air's recommendation is to install a Bry-Air desiccant dehumidifier as they are capable of maintaining dew point as low as -60° C regardless of ambient conditions.

Desiccant Dehumidification in combination with air-conditioning, provides the required humidity and temperature parameters necessary for Engine Testing Rooms. In a Desiccant System, the process airstream passes through a desiccant medium. The desiccant adsorbs moisture directly from the airstream.

