Dew point online monitoring for SF6 gas Insulated equipments:

Traditionally, moisture level has been checked using periodically taken gas samples, but in recent years condition monitoring systems that incorporate online instrumentation for measuring the dew point of SF6 have become increasingly common.

Now it has been quite common for dew point sensors to be installed in the same sensor block as pressure relays or density sensors.

In addition, these blocks are often not directly attached to the main gas tank, but connected to the tank with either polymeric or metal tubing.

In order to ensure the best possible online dew point measurement in an SF6 insulated system, the sensor should be installed as close to the main gas volume as possible, preferably directly onto the tank wall. Minimizing the number of connection points and avoiding the use of plastic or rubber materials close to the measurement cell is also highly beneficial.

The quality and long-term stability of the sensor being used is also a critical factor.

In picture we can see installation of a dew point-pressure temperature sensor for ABB GIS
equipment. This sensor directly connect to main gas tank.