FLUXION TECHNOLOGIES

ILRT PRESSURIZATION OPTIMIZATION PACKAGE

## Reduce Stabilization Time and Real Time Monitor Air Quality to Containment

This rental package is an Add-On to the traditional ILRT pressurization system. It is a custom fabricated spool piece that bolts in-between the outside containment pressurization pipe inlet and the compressor system discharge. Also included is a control panel for data readouts.

1. Temperature Matching

Achieving the desired value of average containment temperature at the end of the pressurization is the single most important factor in reducing both Stabilization and Type A testing times. This option allows for determination of inlet air temperatures required at all times during pressurization to very closely meet the desired value of average containment temperature at the start of the Stabilization phase.

2. Humidity Matching

Achieving the desired value of containment humidity at the end of pressurization will reduce the Stabilization and Type A testing times. This option allows for the control of inlet air dew point to achieve the desired value of average containment humidity very closely at the start of the Stabilization phase. Desiccant driers tend to over-dry the air entering containment extending the stabilization interval. Measuring inlet dew point real time allows periodic by-passing of driers to optimize the containment humidity at the end of pressurization. Periodic bypassing also has the effect of increasing the compressor capacity and thus the pressurization rate by up to 15%.
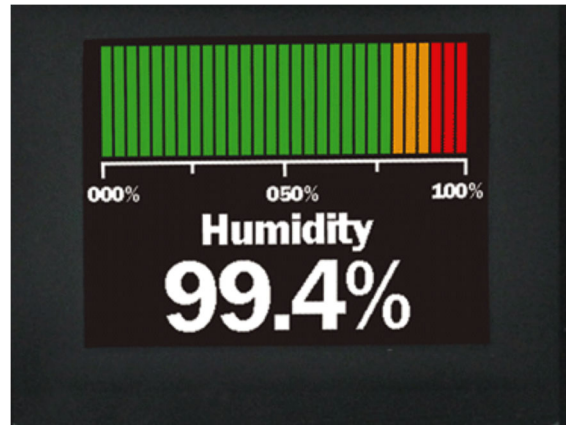
3. Carbon Monoxide and Nitrogen Dioxide Monitoring

The amount of CO and NO^2 present in the air being pumped into containment is continuously monitored. These are possible by products from the pressurization system in the unlikely event of a malfunction. Any issues can be immediately identified ideally during the pretest pressurization system functional test and also during the actual pressurization. The faulty unit can be isolated, and pressurization continued.

4. Particulate Monitoring

It is possible for particulates to be contained in the incoming air stream from external or internal sources. The system continuously monitors for the presence and amount particulates and tabulates them by size.

5. Oil Droplet Monitoring.

The compressors used are designed to deliver 100% oil free air. In case of a malfunction in any one compressor oil droplets in the air stream may be immediately identified either in the pre-ILRT functional test or during the actual pressurization.

6. Air Delivery Rate Verification

Each air compressor is typically rated to deliver 1,600 cfm. When many compressors are tied together with hoses, after-coolers and driers the expected rated total capacity may not actually be achieved. While a functional test is usually performed after the full system is assembled prior to pressurization, this testing does not quantify the actual flow rate to be delivered to the containment. This option allows for flow rate measurement during the functional test. This allows for any issues to be identified and resolved prior to the ILRT. This avoids any unplanned increases in containment pressurization time. Also, access to real-time pressurization flow rates towards the end of the pressurizations allows the test director to maintain high flow rates into containment longer without the danger of over-pressurization.