Condensate issues at Teys Wagga Wagga resolved

Teys Australias Wagga Wagga site in NSW, had been experiencing expensive problems with condensate in their compressed air across the plant. The most severely affected area was a cool room that was temperature controlled to approximately +4°C.

Extensive condensate was present because ambient temperature in the room was lower than the dew point temperature in the compressed air line. As the compressed air cooled all water vapour in the compressed air began to condense into large amounts of liquid.

The systems refridgerated dryer appeared to be working correctly and was appropriately sized, however the condensate present in the wet receivers had to be drained manually multiple times daily at significant cost in man hours.

BVRG recommended a membrane dryer at the point where the compressed air pipe entered the cool room to ensure the compressed aIr dew point would be below +4°C.

To size the membrane dryer correctly, air flow into the room was needed to be measured. BVRG performed a logger survey measuring Flow, Dew Point and pressure for 7 days.

The BVRG analysis of the survey data revealed when condensate was manually drained from the receivers the dew point improved. It was obvious that the root cause of the problem was from build up of condensate in the receivers which could have been avoided with significant cost savings through an improved drainage system.

BVRG recommended Bekomat zero airloss condensate drains, which were installed for their wet receivers. The system was drained across the site at available locations.

The effects on the system were immediate. At the cool room, dew point was reduced to +1°C within a few days and all condensate issues across the site were eliminated.

BVRG issued further recommendation to increase the dew point out of the dryer to +3°C to reduce risks of air condensate freezing and causing damage.

Teys is now considering installing the recommended membrane dryer at the cool room. This would further improve the dew point in the cool room area to -5 to -10°C, which will reduce the reoccurance of condensate even further.

Teys now understand the benefits of measuring dew point on a permanent basis. The costs of purchasing a permanent dew point sensor is minimal compared to the potential disasters and costs related to high dew point and condensate issues. Teys have acknowledged this and will be measuring dew point on a permanent basis.

Please contact us if you would like any further information on this case study or have any questions.