

## Case Study: Compressed Air 4

### Re-design of Compressed Air Plant – Abattoir, Northern NSW

Out Performers re-designed this compressed air plant to achieve energy reductions of 33% and to deliver much-needed operational reliability, redundancy, and improved air quality.

#### Situation:

- The compressed air system was installed in 1948 and was not compliant with the McDonalds' Australia Food Grade Standard requirements or HACCP Methodology.
- The compressor plant experienced a high failure rate due to the local environment and seasonal weather patterns (electrical storms).
- The combination of these factors exposed our client – a Northern NSW Beef Abattoir – to a high level of risk and production downtime.

#### Solution:

- We conducted a Compressed Air **Comprehensive Site Review**, and then a **Detailed Equipment Specification** for the client's selected design option.
- The new design for the compressed air system consisted of:
  - Replacement of the existing two ABAC VT7508 screw compressors and one CompAir EH241 compressor with three Champion VOC 75 compressors.
  - Installation of a Hankison HPRP1750 refrigerated compressed air dryer with in-built filtration to improve the plant's air quality, an activated carbon tower with particulate filter to provide protection to the plant and compliance with HACCP Methodology and Food Regulations.
  - All equipment was installed using 76mm Aluminium Transair piping.

Before



After



#### Operational Benefits:

- Dramatically increased the compressed air plant's reliability.
- Eliminated the risk to the plant associated with poor or contaminated air quality.
- The new compressed air system meets both HACCP Methodology and McDonalds' Australia Food Grade Standard.
- Energy saved per year: **33% reduction in electricity use.**