

Use of Power and flow – Boral Plasterboard Manufacturing Case study Energy costs savings \$30,000/year

The Engineering Manager from Boral Plasterboard in Camellia, Australia wanted to get a better understanding of the compressed air system in the plant and quickly reduce his operating costs.

Boral were running on two compressors operating on a typical lead/lag basis. The compressors were located in separate areas of the plant but fed into one main system and the operating costs were particularly high.

BVRG measured and logged the Power and flow consumption from both compressors over a 1 week period. It became apparent that the second (lag) compressor (an Atlas Copco GA1408 - 140kW) was cycling frequently between load and off load which highlighted that this compressor was in fact only contributing a small amount of air to the system (approximately 1.47m³/minute).

In general the loading cycle was enough to prevent the compressor from going into complete standby mode. From the Power consumption data (figure 1) BVRG and Boral were able to understand that this compressor ran Loaded 7%, unload 89% and standby 4%.



Figure 1: Day profile electrical usage (Compressor 2, Current/Amps) before leak detection

With a much clearer picture of Boral's system they have rectified leakage and efficiency issues which have seen the compressor virtually switch off (see figure 2).

The energy savings will be approximately \$30,000 per annum plus additional maintenance and capital savings.

In the future, once further leakage repairs are completed it is expected that air demand on the lead compressor will also reduce resulting in additional savings.

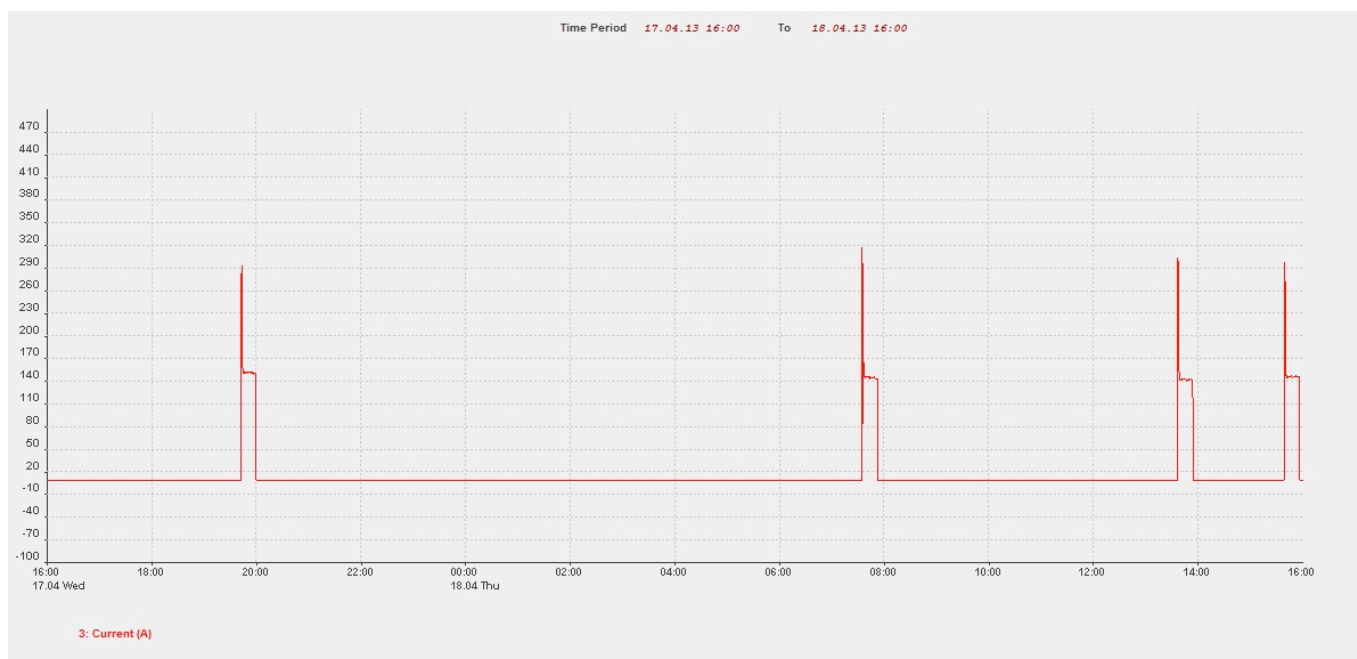


Figure 2: Day profile electrical usage (Compressor 2, Current/Amps) after leak detection and rectification

Through measurement of power and flow Boral have been able to better understand the inefficiencies of their compressed air system and justify the compressed air energy savings initiatives undertaken.

For more information on Boral Case study and the savings achieved please contact the BVRG Project Manager Warwick.Ramley@bvr.com.au, mobile - 0448 138 807.