



COVEY CASE STUDY

In February 2013 Botanical Resources Australia Pty Ltd (BRA) successfully started the final parts of its new Covey built pyrethrum refining line.

Pyrethrum is processed in two stages. First daisy heads are extracted to form a crude oil (oleo) Secondly, the oleo is purified in a refinery to give the final product and a bio-oil which supplies most of the plants fuel needs.

BRA had two existing refinery lines – the first was built some time ago and upgraded by Covey about six years ago; we built the second line in 2010.

The addition of the third line presented a number of challenges, not the least the issue of finding sufficient space. In addition to the refinery line itself, the increased throughput required a number of other changes to the plant, all of which had to be programmed around continuing operation of the existing lines:

- *Rework of dispatch area*
- *Building extension and new MCC*
- *Building new wax removal plant and relocation and upgrading of existing wax removal plant*
- *Relocation of existing sundry equipment to create space for new refining line*
- *Duplication of oleo preparation plant*

Equipment required included:

- *10 new tanks (plus many refurbished and re-used)*
- *15 pressure vessels (for supercritical carbon dioxide)*
- *Nearly 40 pumps (including special units for supercritical operation)*
- *6 fans plus fume extraction fan and system*
- *2 heat pumps*
- *Filter press*
- *Chiller and glycol circuit*
- *14 heat exchangers (plus tanks with jackets and coils)*
- *Air compressor*
- *Weighing and drumming out controls*



With a project of this complexity, some surprises were inevitable:

One piece of equipment had been ordered as 'mirror-image' of existing unit – a few weeks ahead of delivery the manufacturer discovered that this was not possible!

One supplier forgot to process an order for pumps – resulting in them arriving two months late!



Despite all these challenges and the current construction of the new Extraction Plant by Covey Consulting, the 18 month project was completed 2 weeks ahead of schedule and on budget.