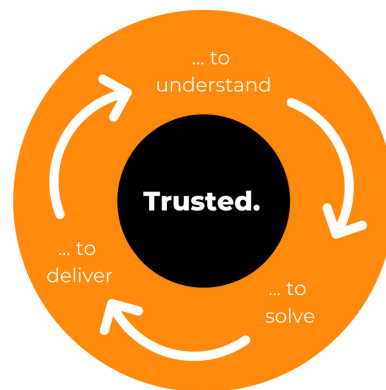




ORC - CHP Heat Transfer System for Aggregates Drying

With many businesses today installing combined heat and power (CHP) plants to generate power for use directly in their own operations or for export to the grid, we work with them to make good use of the heat.

Our aggregate manufacturer client had a top-rate idea of what to use surplus heat from his ORC-CHP plant for, and he trusted us to make it happen.



...to Understand	...to Solve	...to Deliver
<ul style="list-style-type: none"> • Our initial brief was simply to design & manufacture vertically orientated 'custom' coils with fans for an ORC cooling loop, to take the water/glycol mix from temperature down from 50°C to 35°C. • On this basis, the engineering team produced a concept design which included 6 heat exchanger coils and fans. • An imperative for us however is 'to understand' the whole system into which our coils are to be incorporated. • Further probing with the customer during design review revealed the overall objective was to recover the heat from the cooling coils and duct it to a Trommel dryer to dry aggregate. 	<ul style="list-style-type: none"> •but as this project was the customer's first exposure to building such a system, it transpired that neither the ductwork design nor the associated pressure drop calculations had been carried out prior to the request for the cooling coil designs. • We were able to explain the beneficial significance of a whole system approach to the project. • The customer subsequently extended the brief from the initial requirement of cooling coils & fans to include the design & installation of the ductwork and re-specification of the fans to account for the pressure drop. • It was established that 6 runs of ductwork, each of different dimensions, and upgraded fans were required. 	<ul style="list-style-type: none"> • The customer welcomed, and was reassured by, the engineering team's style of engagement and 'whole system approach' to the project. • The end result included: <ul style="list-style-type: none"> ◦ 6 heat exchangers designed, delivered, and installed. ◦ 6 fans procured and installed. ◦ 6 ductwork runs designed, procured, and installed. ◦ A Lifecycle Extension contract to ensure the on-going effective operation of the equipment.

"It was extremely satisfying to be able to support this highly successful aggregates manufacturer that had diversified as a ORC-CHP operator get best value of a system that was new to them. Making effective use of heat from ORC-CHP cooling circuits is certainly a growing area of interest and one we are keen to support."

PETER MURPHY

Turnbull & Scott Managing Director