

Industrial Chiller System for Murrin Murrin concrete plant 1000 m³/day medium temp output



OBJECTIVES

- **Design and recommend chilling system for a concrete batching plant in Central West Australia.**
- **Co-ordinate the contractors involved in conjunction with CSR.**
- **Ensure provision for expansion or backup chiller at a later date.**
- **Time duration of project 6 weeks**
- **Batch Plant capacity up to 100m³ per day**

INTRODUCTION

To supply the Murrin Murrin Nickel/Cobolt Project, CSR built a concrete batching plant. Plants of this size need large chillers to control heat buildup in the batching process.

Control and Thermal Engineering were asked to submit a report advising the best option to suit their chilling needs.

The solution. A chilling system consisting of three 100,000 litre insulated storage tanks surrounding a central sump tank. Fluid is drawn from the sump tank through 380kW chiller and returns to one of the large storage tanks. The fluid is then delivered through 3 separate pumps for the batch water, stand-by, and slumping stand. These three circuits are set up as continuously flowing pressurised loops via stream regulating valves at the return points.

The entire system is controlled by a S.C.A.D.A. system monitoring and controlling such things as temperature, flow, pressure and fluid levels together with alarms and system shutdown in case of faults.

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