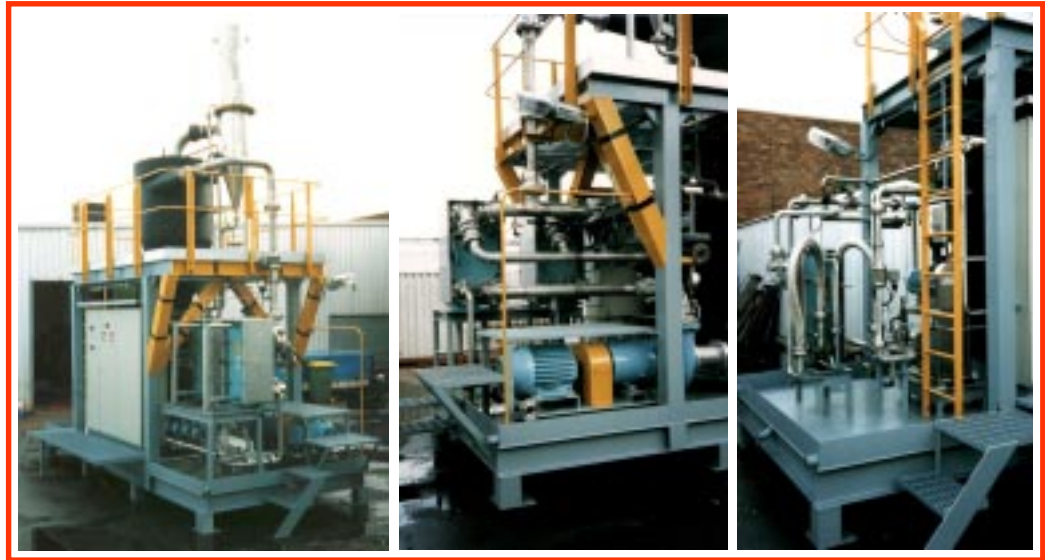


# Flash Evaporator Module for Mineral refining industry



## OBJECTIVES

- To design and construct a flash evaporator module as part of a Pilot Liquor Treatment Plant.
- A flash evaporator module removing one tonne per hour.
- Incorporating onboard preheat and twin secondary steam driven plate heat exchangers.
- Including an 1100 kL holding vessel below the flash evaporator.
- Incorporating a spray treatment cyclone after the flash evaporator.
- A Supervisory Control and Data Acquisition system to constantly monitor and adjust onboard pumps and control valves.

## INTRODUCTION

Control and Thermal Engineering were asked to design and manufacture a series of modules as part of a pilot liquor treatment plant. One such module was the "Flash evaporator module".

CTE were able to fully design and manufacture the Flash evaporator module together with all onboard monitoring and control systems. The module required specialized design considerations and construction as it was handling liquor at temperature, and also steam as the heating medium for the secondary heat exchangers. It also required a system of descaling or flushing lines.

Stainless steel construction was widely used and comprehensive safety systems needed to be incorporated to deal with the high pressures and the hazardous medium being processed.

In addition to the construction of the Flash Evaporator Unit, CTE were contracted to design and construct a series of other modules crucial to the overall process which eventually covered some 500 sqm of plant area. The client set a challenging time frame, but all work was completed on time and under budget, including installation, programming, commissioning.

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