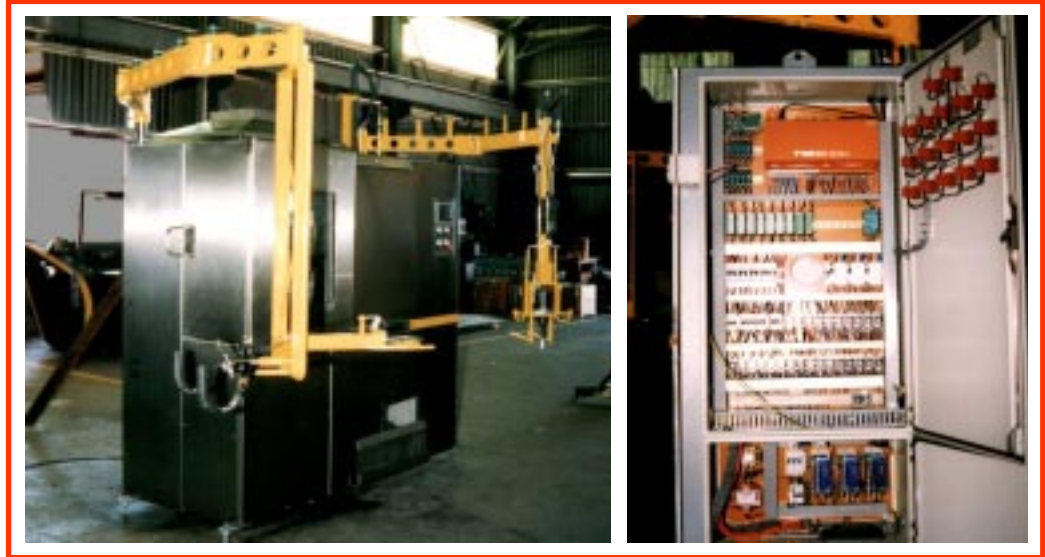


## Case Study 16

# Parr Bomb Oven for industrial chemists



### OBJECTIVES

- To design and construct a bomb oven used for testing multiple ore samples enclosed in 'Parr bombs'.
- To provide removal and insertion means for loading the oven.
- Being designed with the ergonomic interests of the operator in mind.
- Safety being paramount at all times.
- A high level of automation to reduce operator time.

### INTRODUCTION

Some industrial chemists in the course of their work use what is known as a Parr bomb oven. Parr bomb ovens are a specialized piece of equipment, not usually available off the shelf.

Ore samples mixed with caustic are placed into canisters called bombs. There are a number of bombs mounted on a rotating carousel in the oven. The carousel is in the horizontal for loading, and swinging up to the vertical for the heated digestion phase. The oven goes through this preprogrammed digestion cycle, then returns to horizontal for a water cooling phase.

CTE also designed a carousel removal system mounted on a lifting arm. A second arm was added to facilitate a tension device arrangement for tightening and loosening the bombs.

The system also comes with two adjustable height trolleys for transporting the carousels around the lab. Fitted with a high level of automation and safety features the bomb oven is designed for high output, ease of use and safety of the operator.

*For more information about our services and products contact:*

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