

Mineral Refining Pilot Plant Belt Filter Refurbishment



OBJECTIVES

- Adapting a client's existing belt filter to more adequately suit their needs.
- Installing a S.C.A.D.A. system to enable accurate monitoring, control and data logging of the unit.
- Generally providing greater versatility to the unit by adding VSDs, multiple vacuum receivers, multiple pump and spray systems.
- The addition of guards and covers to ensure the safety of the operators.

INTRODUCTION

A client approached Control and Thermal Engineering with a Belt Filter Unit which had been built for a previous project by a third party.

The system was a basic design and as such lacked the necessary versatility and monitoring abilities to take on a new task.

It was decided to upgrade the system to incorporate much needed versatility and control systems necessary for the proposed application carried out by CTE.

The belt was fitted with a VSD. The belt vacuum was divided into three sections allowing the varying of vacuum pressure along the belt. The provision of a partitioned vacuum receiver. Three stages of under flow pumps to take fluid away from the vacuum receiver, together with purge water systems to negate dry running. A more complex spray system was added. Certain safety hazards were rectified by provision of guards. Finally a roof was fitted for obvious reasons.

The rig successfully adapted to it's new application.

Already plans are in place for yet another application thanks to the versatility of this rig.

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