



A large smelter in Tasmania, operating with a Honeywell Experion® PKS DCS and HMI.

THE ISSUES

Dirty water pumped from the Scrubber system into a Fume Dam contained sufficient percentage of solids to limit the effective life of the dam. In order to extend the life of the Fume Dam a method of extracting the solids from the Scrubber water, prior to reaching the Fume Dam, was required. For this purpose an Ishigaki Filter Press was selected to filter the solids from the Scrubber water. The outputs shall be filtered water and filtercake, both to be recycled in other areas of the process.

It was decided that the control of the Filter Press shall be integrated into the existing on-site Honeywell Experion system – rather than via a standalone non-standard system. The Filterpress control system had to be reworked to fit the site Control System Design Guidelines and Philosophy. The site uses a Honeywell Experion DCS and HMI system that was to be used to control the filter press and provide operator feedback, control and alarming.

THE PROJECT

As a first stage Cromarty were commissioned to author a Functional Requirements Specification for the filter press control. The specification details the:

- How the filter press, and ancillary equipment, are to be controlled
- Sequence steps for each machine state
- Sequence start conditions
- Fault triggers and handling
- Modes of operation
- HMI Displays according to ASM standards

Cromarty staff then developed the DCS Control Modules, Sequential Function Chart Modules and HMI displays in accordance with the Functional Specification.

CASE STUDY:

Tasmanian Smelter

CHALLENGE

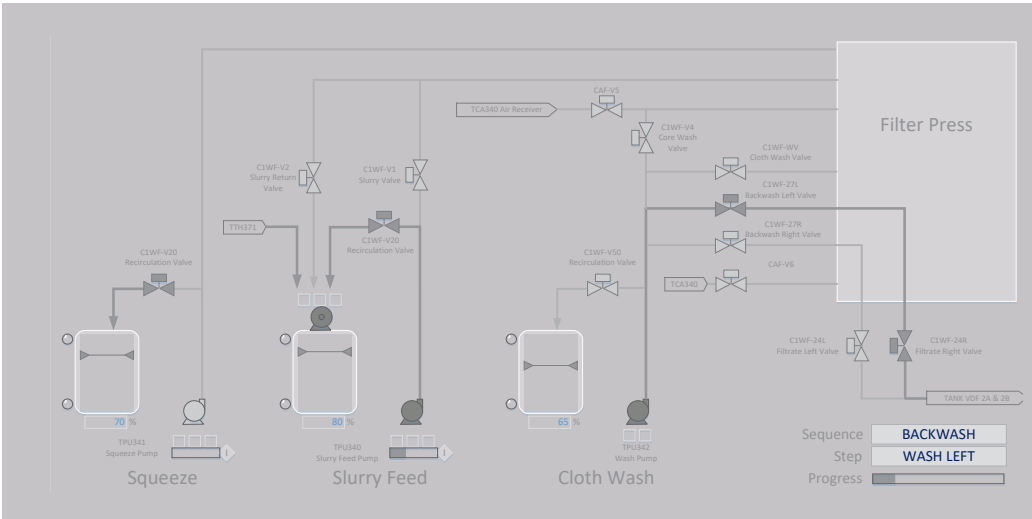
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SOLUTION

Cromarty authored a Functional Requirements Specification for the filter press control. Cromarty then developed the DCS Control Modules, Sequential Function Chart Modules and HMI displays in accordance with the Functional Specification.

RESULTS

After successful commissioning the filter press is being used to extend the life of the Fume Dam.



THE RESULTS

After successful commissioning the filter press is being used to extend the life of the Fume Dam. Having developed the system using site standards and existing control systems, the site has been able to leverage its existing process control infrastructure and reduce maintenance complexity.

FILTER PRESS OPERATION

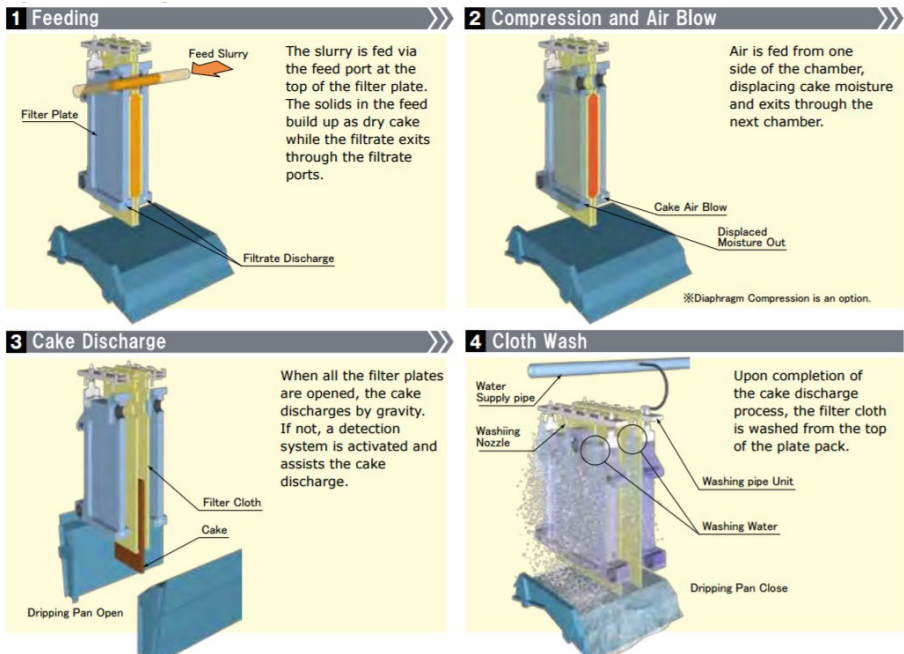


Image credit: (http://www.ishigaki.com.au/uploads/3/7/3/8/37389811/icl_lasta_filter_press.pdf)

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