WORSLEY ALUMINA CALCINER-4 BURNER MANAGEMENT SYSTEM PROJECT

PROJECT OVERVIEW

BHP Billiton Worsley Alumina Pty Ltd (BWAPL) operates an alumina refinery and coal fired power station in Collie, Western Australia. The safety integrity of the existing Calciner 4 Burner Management System and associated gas equipment has been upgraded to meet current regulatory and statutory requirements and achieve compliance to AS IEC 61508/61511, the international standard for functional safety of programmable systems.

OUR SERVICES

As the Project Manager and System Integrator, I&E Systems, worked closely with the client, Combustion Engineer and WorleyParsons Safety and Risk Management, in the management of Functional Safety during the initial phases of the Safety Lifecycle.
FEATURED PROJECT FOR FUNCTIONAL SAFETY SERVICES

+ OUR SERVICES

Guided by the our TÜV approved Functional Safety Management Framework the scope of our work extends to:

- Co-ordinate and participate in the HAZOP and SIL Assessment workshops for the Calciner 4 BMS.
- Review and approve jointly with the client the Hazard Study and SIL Assessment reports and Safety Requirement Specification developed by WorleyParsons.
- Develop the BMS Safety Software Requirement Specification in conjunction with the Combustion Engineer.
- Develop BMS Software test procedures to validate the code developed.
- Provide support and supervision to Honeywell during the BMS hardware design, code development and validation testing.
- Design of the complete Instrument & Electrical field installation including selection of equipment to meet SIL and AGA requirements.
- Develop procedures for the migration, commissioning and re-certification of the new BMS.

DAD – System Information Modelling software was used extensively on the project.

+ OUTCOMES

DAD System Information Modeling was used extensively for the design of this system. It resulted in virtually error free construction work and significant man-power and time savings.

+ CONTACT US

For further information about Functional Safety services please contact our Business Development Managers:

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Australia (excluding WA): Rob Gillespie on +61(0)408 309 788 or via email at rob.gillespie@iesystems.com.au

+ CURRENT STATUS

The BMS hardware and software has been successfully validated and installed on site. The field equipment has been installed and commissioned with the exception of the gas skids, which have been fabricated, tested and ready for mechanical tie in to the process and connection to the BMS. The project is currently waiting on the allocation of a Calciner 4 plant shutdown window from the client to complete the migration, commissioning and re-certification of the gas trains.