

SCOPE

Design, supply, implement, test and document the upgrading of old legacy systems to provide up to date Supervisory and Control System.

EQUIPMENT

Data Concentrator located in CHP control room interfacing with the following:-

- * Four Legacy Siemens S5 PLCs
- * Thirteen discrete PID loop controllers (Modbus)
- * New Allen-Bradley PLC gas blower process controller
- * New Allen-Bradley Turbine control PLC
- * SCADA Server Computer
- * Five SCADA client servers

INTRODUCTION

The plant takes bi-product gases to two boilers for steam generation to a single 12MW generator. The plant consists of a number of stand alone systems and is manually controlled.

This project, was initially to assess the existing legacy systems used to control individual processes on the CHP station, and advise the most effective method of integrating the separate control systems.

The individual areas of plant include:-

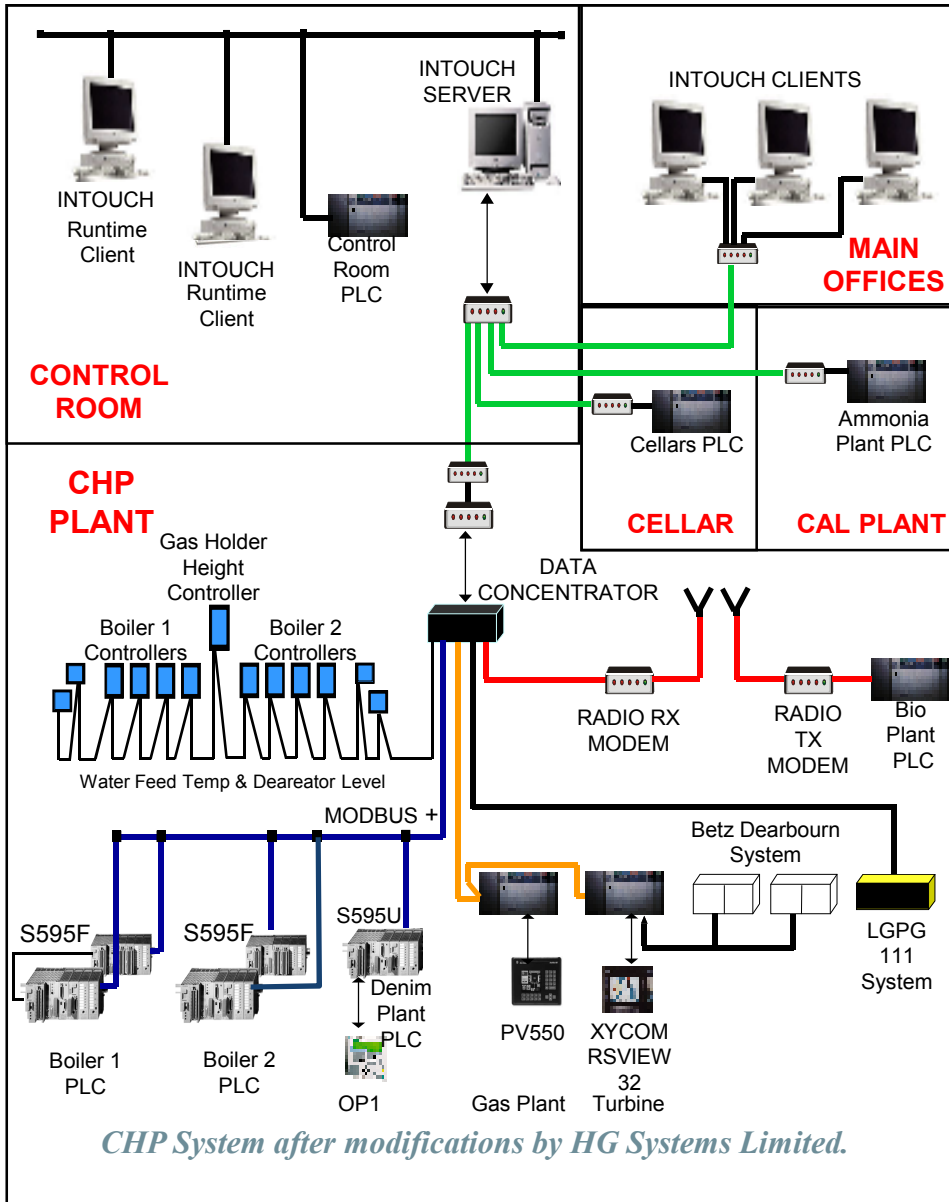
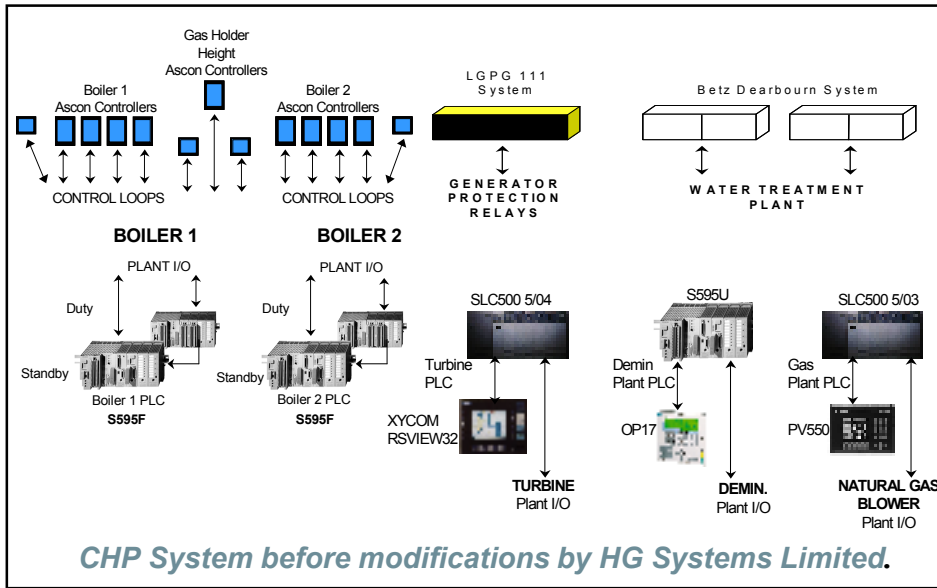
- * Boiler Header
- * Two Boilers
- * Natural Gas Blowers
- * Turbine Control
- * Demineralisation Plant
- * Generator Protection Relays
- * Water Treatment System

Originally all of the areas of plant were running in a stand alone mode with no integrated control. HG Systems developed a control strategy to provide the client with a Centralised Control Room SCADA system using data transferred over an existing Network to a new InTouch SCADA system.

HG Systems used their vast experience to upgrade, and in some instances, replace existing hardware to provide a suitable foundation on which to build the system.

A number of areas required new installations and these included, but were not limited to, the Ammonia plant, Biological effluent plant and the cellar areas.

SYSTEM OVERVIEW



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