

CARBON CAPTURE AND STORAGE - OXYPROP



» CAPTURING CO² – MORE EFFICIENTLY AND AT LESS COST

DESCRIPTION

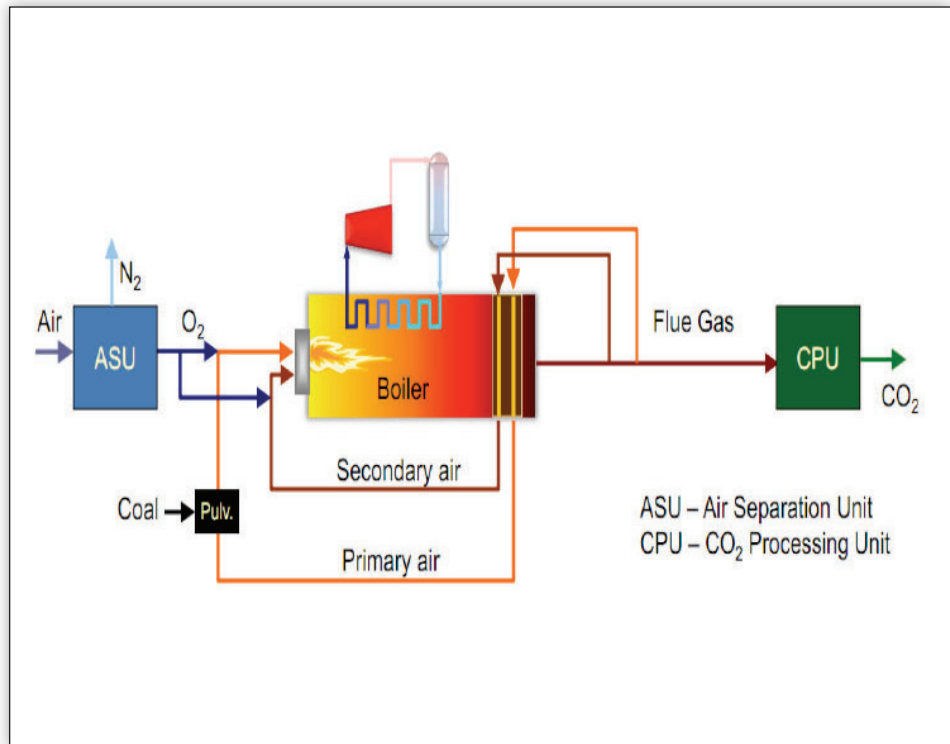
- An oxyfuel power plant involves burning coal in oxygen, rather than in air, resulting in a concentrated stream of CO² which is readily captured and purified for storage
- Costain has developed a patented approach for CO² separation and compression
- This programme is to evaluate the scheme in detail to see how it can operate in a power plant and whether worthwhile capital and operating savings can be made

KEY INDUSTRY CHALLENGES

- The current generation of technology for capturing CO² from power plant is very expensive
- Our challenge is to reduce the cost of capturing CO² and to increase the efficiency of capture

CUSTOMER BENEFITS

- Enhanced understanding of how this type of system can be integrated into a power plant to maximise efficiency
- Enhanced understanding of the role of impurities in an oxyfuel process
- A demonstration of the potential for increased efficiency and reduced cost of CO² capture



TECHNICAL SECTION -

THE PROCESS

- OxyPROP – Oxygen Penalty Reduction Options Programme – is a collaboration with the Universities of Edinburgh and Leeds to develop the basic system design
- Funding secured from DECC
- Focus is on modelling of the process to find the most efficient system layout, followed by detailed studies of how our design can be integrated into a power plant – the goal is to find ways of minimising energy consumption

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