

Project COMET



Research on metering technologies for CO₂ pipelines

21 February 2013

Agenda

- Project COMET

- Project Partners
 - Heriott Watt University
 - Interconnector

- Initial results

Project COMET - Overview

➤ **C**oriolis **M**etering **T**echnology in CO₂ pipelines

➤ **Hypothesis**

- Orifice metering struggles to deal with impure, multi-phase CO₂
- Coriolis meters may deliver advantages:
 - ✓ Better accuracy
 - ✓ Better able to handle impure CO₂ streams
 - ✓ Economic factors – high turn down range avoiding multi stream measurement

➤ **Project Objectives**

- To develop a set of criteria for assessing metering alternatives
- To conduct laboratory studies to evaluate alternatives
- To engage with partners to help promote selection and commercialisation of appropriate technology

➤ **Partners**



➤ **Sponsor**





Project COMET - Activities

1. Desktop Evaluation

- **Develop criteria**
- **Evaluate previous studies**
- **Engage with partners**

2. Trials

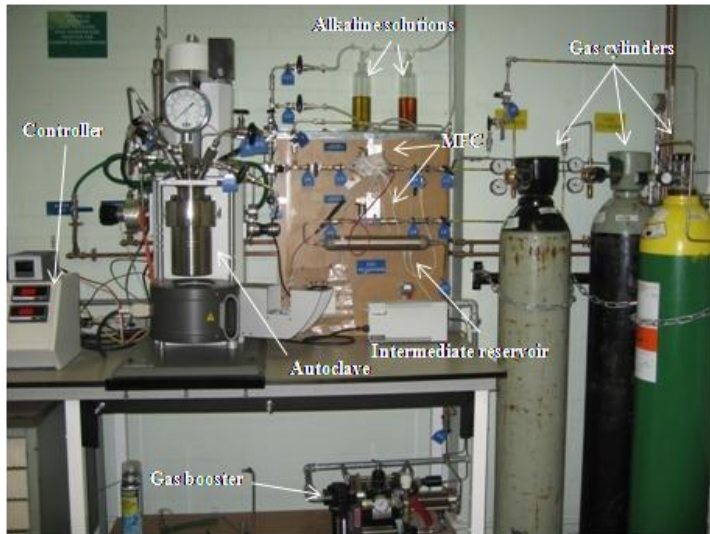
Lab Trials

Plan for next steps

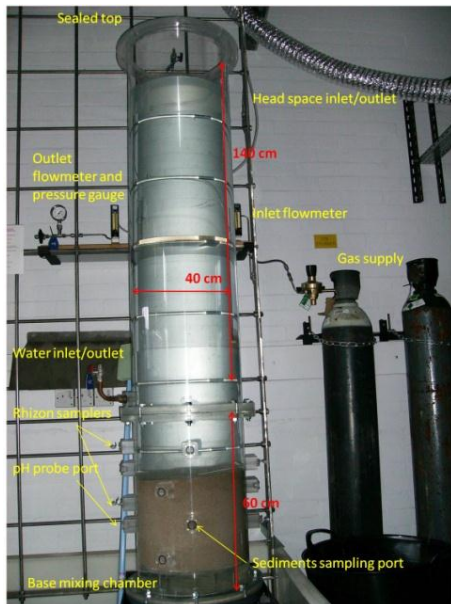
3. Commercialisation

- **Technical specification**
- **Cost estimates**
- **Market potential**

Collaboration with research partners and OEMs



- One of the UK's leading universities in the area of CCS research
- Specific experience in the development and use of HP CO₂ laboratory systems
- Actively collaborating on the study of the effects of impurities in the CO₂ stream with other researchers worldwide
- A large body of scientific publications
- Strong background in working with industry, strong links with the oil and gas companies



Why Interconnector?

- **IUK transports gas by pipeline between GB and Belgium**
- **Core skills in gas terminals, compressors, subsea pipelines, O&M, metering, and service provision to multiple customers**
- **CO₂ transport by pipelines fits our skill set very well**
- **Happy to play an active role in developing the industry and CCS technology**
- **Value in bringing an industry perspective**
- **Collaborative model**





Initial Assessment Criteria

- Ability to handle CO₂ stream
 - System integrity
 - Accuracy of measurement
 - Flow characteristics

- Risks and practicality
 - Reliability
 - Operating Range
 - Pressure drop
 - Comms requirements

- Economic criteria
 - Capex
 - Opex