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CO2 Capture and Pumping

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Personal experiences with subcritical and supercritical CO2 date from the early 1980's

ABSTRACT

A generic tutorial on the capture of CO2 from stack gases, its compression, pumping and injection. Pump types, thermodynamics, equations of state, sealing, and other related subjects discussed.

INTRODUCTION

This is a enhanced repeat of the CO2 tutorial given last year. Its purpose is to acquaint the audience with generic CO2 scrubbing methods, when one might consider a pump or compressor, methods of calculating pump performance on supercritical CO2, and the movement and injection of CO2 for sequestration or enhanced oil recovery. Sealing technology and experiences will be provided.

TOPICS

CO2 Value Chain and Scrubbing Methods
Pump and Compressor CO2 Applications
Supercritical CO2 Applications
Recent CO2 pump pictures

CONCLUSIONS

Given substantial funding, it is obviously possible to scrub CO2 out of stack gases, compress it to pipeline pressures and inject it into formations for sequestration or enhanced oil recovery. The economics of the scrubbing are touched upon. The experiences from early 1980's provide reference for current enhanced methods of calculation of performance and sealing technology. More recent CO2 experiences are provided.

REFERENCES

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