1. Introduction

Vattenfall could gain essential knowledge and practical experiences from the Oxyfuel pilot plant. The formulation was derived from it for the demo project. The Oxyfuel demo plant shall have electrical power of 250 MW and set up in the power plant Jänschwalde. The concept is based on lignite (brown coal) with an integrated coal drying. A pipeline transport and the storage in a saline Aquifer were planned.

2. Overview

This is an overview lecture for Vattenfall’s Oxyfuel demo plant. An overview of the technical concept and the measuring concept will present. Primarily the selection and design of all components will be explained. Changes are discussed to O2 and CO2 purities in opposite to pilot plant. In addition also the concept for transport and storage will be explained. Efficiency and costs are presented. Furthermore potentials for increase of efficiency of the Oxyfuel process are discussed. It is justified, why this project not set up as original planned.

3. Details

Following details are explained:
- Concept Demo plant, Design and Basic data (Fuel, Emissions, efficiency, CO2 removal rate)
- Concept for boiler, burner and individual components and their effect on the complete process
- Requirements on ASU and CO2 plant (purities)
- Potentials for Oxyfuel technology