



next-CSP

High Temperature concentrated solar thermal power plant with particle receiver and direct thermal storage

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Deliverable 4.3

WP4 – Construction and commissioning of the complete solar and heat conversion loops at Themis solar tower

Deliverable D4.3. Report on the erection and commissioning at the testing facility at Themis solar tower

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Introduction

This document describes the installation work undertaken by Whittaker Engineering (Stonehaven) Limited (WEL) of the solar loop inside the Themis tower. Additionally, a summary is provided of outstanding work required to complete the installation of the solar loop.

Outstanding Installation

1 Installation by WEL

The following work is required to be undertaken by WEL to complete the installation of the solar loop:

- Installation of hot store
- Installation of heat exchanger
- Installation of compressor
- Installation of de-duster
- Installation of elevator
- Installation of ancillary pipework

2 Installation by others

In addition to the work to be undertaken by WEL, the following is also required to be completed by other parties:

- Fitting of all instrumentation to solar loop components
- Fitting of instrumentation cabinet
- Tie-back of instrumentation to instrumentation cabinet (including cable trays)
- Tie-back of all electrical equipment to existing electrical cabinet (including cable trays)
- Commissioning of electrical and instrumentation equipment
- Connection of instrumentation cabinet to existing ethernet connection
- Installation and commissioning of turbine (both mechanical and electrical)
- Design and installation of pipe supports required to prevent overloading of turbine manifold connections
- Initial setup of solar loop prior to operation (e.g. filling of loop components with powder)