



## Supercritical CARbon dioxide/Alternative fluids Blends for Efficiency Upgrade of Solar power plant

## -PRESS RELEASE-

The test rig of the SCARABEUS project at the Technical University of Vienna (TUW) has been commissioned successfully. The steps involved since the beginning of the project were: a HAZOP study, a design review, and the official commissioning. All these steps were taken under the guidance of the notified body in Austria (TÜV Austria).

The original test facility existing at TUW was modified to a recuperated Rankine cycle. In the first test campaign, the novel heat exchangers with pure CO<sub>2</sub> will be examined: the recuperator (a printed circuit heat exchanger) and the air-cooled condenser - both from the project partner Kelvion Thermal Solutions. A brand new gas burner and the attached Inconel primary heater will supply the testing section of the facility us with flue gas at 850 °C and heat up the CO<sub>2</sub> to 650  $^{\circ}$ C.

| Technische Universität Wien<br>Institut für Energietechnik und Thermody<br>Getreidemarkt 9/BA, 1060 Wien, Österre | namik<br>ich | /E302  |
|---|--------------|--|
| Туре  |              | Baugruppe  |
| Baujahr   |              | 2023   |
| Projekt-Nr.   |              | D302 011 1000  |
| Baugruppen-Name   |              | sCO2 Versuchsanlage TU-Wien  |
| Volumen   | V            | 210 Liter  |
| Medium<br>Fluide Gruppe nach DDGV   |              | Kohlendioxid (CO <sub>2</sub> ) / Kohlendioxid<br>(CO <sub>2</sub> ) + Hexafluorbenzol (C <sub>6</sub> F <sub>6</sub> )<br>2 |
| Zulässige min./max. Temperatur  | TS           | 0°C / +650°C   |
| min./max. zulässiger Betriebsdruck HD   | PS           | 0 / +232 bar   |
| min./max. zulässiger Betriebsdruck ND   | PS           | 0 / +100 bar   |
| Prüfdatum   |              | 04/2023  |
| Kategorie nach DDGV   |              | IV   |
| Modul nach DDGV   |              | G  |
| Hersteller  |              | Zauner/<br>RM Rohrmontagen   |
| StF: BGBI, II Nr. 59/2016   | 040          | 8  |

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| SCARABEUS pa                         | SCARABEUS partners            |  |  |
|--------------------------------------|-------------------------------|--|--|
| Academia and R&D                     | Industry                      |  |  |
| Politecnico di Milano (IT)           | Baker Hughes (IT)             |  |  |
| University of Seville (ES)           | Kelvion (FR)                  |  |  |
| City, University of London (UK)      | Abengoa (ES)                  |  |  |
| Vienna University of Technology (AT) | Quantis (CH)                  |  |  |
| University of Brescia (IT)           |                               |  |  |
|                                      |                               |  |  |
| roject Coordinator:                  | <b>Dissemination Manager:</b> |  |  |

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