VCV Analysis Test Stand Diesel Pumps

General view

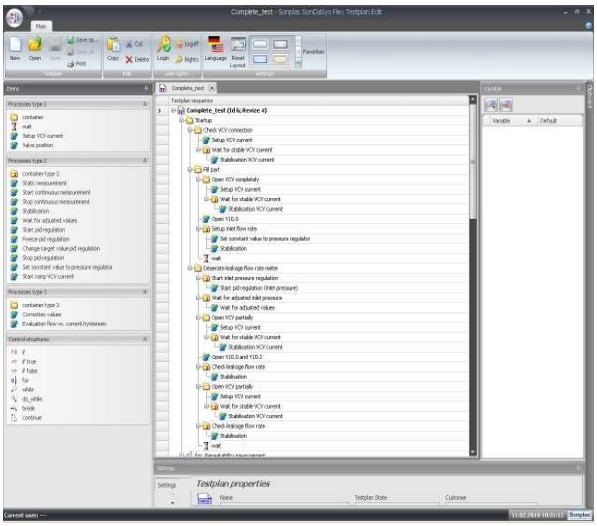
Brief Description

The test bench has been designed for testing important characteristics of so-called VCVs (**V**olumetric **C**ontrol **V**alves). The VCV is a proportional valve and part of a high-pressure diesel pump. The volumetric measurement is done by two selectable Coriolis flow meters with a different maximum range.

In general, the following test functions are available:

- Flow and pressure measurement in dependence of pressure and current.
- Determination of flow/current hysteresis of the component.

The bench is realized as semi-automatic machine with manual on- and offload and automatic test run.



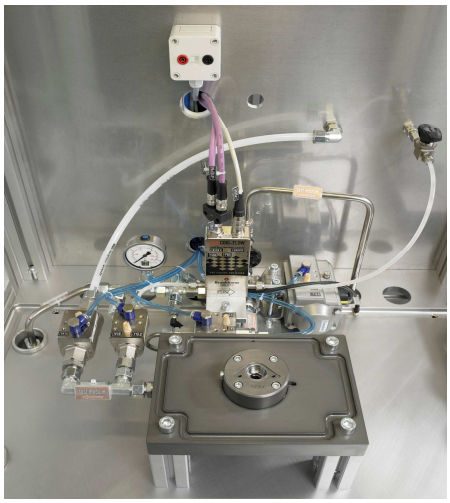
Example of flexible test plan

Highlights

- Interchangeable part housing for different VCV types
- Three VCV controllers for controlling the test sample with different frequencies
- Direct leakage measurement
- Flexible test plan to alter the test sequence regarding the following opportunities:

  1. Easy to use drag and drop functionality of predefined, configurable macro processes.
  2. Add on of new test steps to a test sequence is done in a short time.
  3. Additional control of test sequence by loop counters and conditional expressions.
  4. Test steps of sequence can easily be activated/deactivated by mouse click.
  5. Type specific storage of test sequences.

- Generation of reports according to the test sequence configuration



Test chamber with VCV housing

Technical Data

- Test fluid: V-Oil 1404
- Test pressure: 4…6 bar
- Flow range: 0…6000 ml/min @ 6 bar
- Low flow range: 0...20 ml/min
- Oil temperature: 40 ± 2 °C
- Current regulation: 0…2 A @ 14 V

Sonplas

Sonplas GmbH ▪ Sachsenring 57 ▪ 94315 Straubing ▪ Tel:+49-9421-9275-0 ▪ Email: info@sonplas.com ▪ www.sonplas.com