Documentation

Matlab Codes

Ts_diagram.mat

1. Function name:

Ts_diagram.mat

2. Model description:

Ts_diagram.mat is a single matlab code developed to plot T-s diagrams of organic Rankine cycles while controlling the display properties.

3. Model inputs:

The code inputs are:

- TS: a structure variable which contains the TS vectors of the different components in the organic Rankine cycle;
- param: a structure variable which contains all the display parameters;

4. Model parameters:

The model parameters provided in 'param' must include the following variables

- param.color_ctf = line color for CTF
- param.LineStyle_ctf = line style for CTF
- param.LineWidth_ctf = line width for CTF
- param.MarkerType_ctf = marker type for CTF
- param.alpha_ctf = transparency for CTF
- param.MarkerSize_ctf = marker size for CTF
- param.color_htf = line color for HTF
- param.LineStyle_htf = line style for HTF
- param.LineWidth_htf = line width for HTF
- param.MarkerType_htf = marker type for HTF
- param.alpha_htf = transparency for HTF
- param.MarkerSize_htf = marker size for HTF
- param.color_orc = line color for ORC
- param.LineStyle_orc = line style for ORC
- param.LineWidth_orc = line width for ORC
- param.MarkerType_orc = marker type for ORC
- param.alpha_orc = transparency for ORC
- param.MarkerSize_orc = marker size for ORC

5. Model outputs:

The three graphical outputs of this code are:

- line_htf: graphical variable which includes properties of HTF display (useful for plotting legend)
- line_ctf: graphical variable which includes properties of CTF display (useful for plotting legend)
- line_orc: graphical variable which includes properties of ORC display (useful for plotting legend)

6. External function requirements:

The user must download patchline.mat to Ts_diagram.mat.

7. Matlab version:

This code has been developed under Matlab R2015a

8. Contact:

For any further information, please contact one of the main developers of ORCmKit:

- Rémi Dickes (rdickes@ulg.ac.be) – University of Liège (Belgium)
- Davide Ziviani (davide.ziviani@ugent.be) – Ghent University (Belgium)