Pinch Analysis

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ONE

PINCH-ANALYSIS

Pinch-point technique for heat integration analysis in chemical plants.

1.1 Getting Started

No package is provided. No docker image is provided. Simply clone https://github.com/ahoetker/pinch-analysis.git, and run `pip install -r requirements.txt` to create the Python environment.

1.2 Usage

In this stage of development, the only target is a run script. Run `python main.py`.

1.3 Testing

No unit tests are currently written.

1.4 Authors

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PLOTS

plots.**cold_composite**(*enth: numpy.array*, *temp: numpy.array*) → None
Cold composite curve

Parameters

- **enth** – array of enthalpy values
- **temp** – array of cold temperatures

Returns None

plots.**combined_composite**(*enth: numpy.array*, *temp_cold: numpy.array*, *temp_hot: numpy.array*, *dtmin: numpy.float64*, *pinch_temp: numpy.float64*, *min_cooling: numpy.float64*, *min_heating: numpy.float64*) → None
Combined composite curve

Parameters

- **enth** – array of enthalpy values
- **temp_cold** – array of cold temperatures
- **temp_hot** – array of hot temperatures
- **dtmin** – minimum allowable temperature difference
- **pinch_temp** – temperature at the pinch
- **min_cooling** – minimum allowable cooling heat flux
- **min_heating** – minimum allowable heating heat flux

Returns None

plots.**grand_composite**(*enth: numpy.array*, *temp: numpy.array*) → None
Grand composite curve

Parameters

- **enth** – array of enthalpy values
- **temp** – array of temperatures

Returns None

plots.**hot_composite**(*enth: numpy.array*, *temp: numpy.array*) → None
Hot composite curve

Parameters

- **enth** – array of enthalpy values
- **temp** – array of hot temperatures

Returns None

plots.**stream_matching**() → None

Steam matching diagram I am still unsure how to create this diagram, so this is a pure stub with no parameters.

Returns

CHAPTER

THREE

PINCH-ANALYSIS

Pinch-point technique for heat integration analysis in chemical plants.

3.1 Getting Started

No package is provided. No docker image is provided. Simply clone https://github.com/ahoetker/pinch-analysis.git, and run `pip install -r requirements.txt` to create the Python environment.

3.2 Usage

In this stage of development, the only target is a run script. Run `python main.py`.

3.3 Testing

No unit tests are currently written.

3.4 Authors

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