

Python 3.7.0 (default, Jun 28 2018, 07:39:16)
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IPython 7.9.0 -- An enhanced Interactive Python.

Restarting kernel...

In [1]: from thermosteam.tests import test_reaction

In [2]: test_reaction()

```

*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 704, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    reaction = rxn.ParallelReaction([
Exception raised:
    Traceback (most recent call last):
      File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
        compileflags, 1), test.globs)
      File "<doctest
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2[4]>",
line 1
        reaction = rxn.ParallelReaction([
                                ^
SyntaxError: unexpected EOF while parsing
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 706, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    rxn.Reaction('2H2 + O2 -> 2H2O',
X=0.7),
reactant='H2',
Exception raised:
    Traceback (most recent call last):
      File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
        compileflags, 1), test.globs)
      File "<doctest
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2[5]>",
line 1
        rxn.Reaction('2H2 + O2 -> 2H2O',
X=0.7),
reactant='H2',

```

```

^
IndentationError: unexpected indent
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 707, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    rxn.Reaction('CH4 + O2 -> CO2 + 2H2O',          reactant='CH4',
X=0.1)
Exception raised:
  Traceback (most recent call last):
    File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
      compileflags, 1), test.globs)
    File "<doctest
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2[6]>",
line 1
    rxn.Reaction('CH4 + O2 -> CO2 + 2H2O',          reactant='CH4',
X=0.1)

```

```

^
IndentationError: unexpected indent
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 708, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    ])
Exception raised:
  Traceback (most recent call last):
    File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
      compileflags, 1), test.globs)
    File "<doctest
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2[7]>",
line 1
    ])
^

```

```

^
IndentationError: unexpected indent
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 712, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    reaction(s1)
Exception raised:
  Traceback (most recent call last):
    File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line

```

```

1329, in __run
    compileflags, 1), test.globs)
    File "<doctest
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2[11]>",
line 1, in <module>
    reaction(s1)
NameError: name 'reaction' is not defined
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 713, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    reaction.adiabatic_reaction(s2)
Exception raised:
Traceback (most recent call last):
  File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
    compileflags, 1), test.globs)
    File "<doctest
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2[12]>",
line 1, in <module>
    reaction.adiabatic_reaction(s2)
NameError: name 'reaction' is not defined
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 714, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    print('AFTER NON-ADIABATIC REACTION')
Expected nothing
Got:
    AFTER NON-ADIABATIC REACTION
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 715, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    s1.show()
Expected nothing
Got:
    Stream: s1
    phase: 'l', T: 298.15 K, P: 101325 Pa
    flow (kmol/hr): H2    10
                    O2   100
                    CH4   5
                    H2O  1e+03
*****

```

```

File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 716, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    print('AFTER ADIABATIC REACTION')
Expected nothing
Got:
    AFTER ADIABATIC REACTION
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 717, in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
Failed example:
    s2.show()
Expected nothing
Got:
    Stream: s2
    phase: 'l', T: 298.15 K, P: 101325 Pa
    flow (kmol/hr): H2    10
                    O2    100
                    CH4   5
                    H2O  1e+03
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 297, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
    print('BEFORE REACTION')
Expected nothing
Got:
    BEFORE REACTION
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 298, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
    s1.show()
Expected nothing
Got:
    Stream: s1
    phase: 'l', T: 298.15 K, P: 101325 Pa
    flow (kmol/hr): H2    10
                    O2    20
                    H2O  1e+03
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 299, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
    print(f'Enthalpy of stream s1 is {s1.H:.0f}')

```

Expected nothing

Got:

Enthalpy of stream s1 is -124044

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 300, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
```

```
s2.show()
```

Expected nothing

Got:

Stream: s2

phase: 'l', T: 298.15 K, P: 101325 Pa

```
flow (kmol/hr): H2    10
                  O2    20
                  H2O  1e+03
```

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 301, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
```

```
print(f'Enthalpy of stream s2 is {s2.H:.0f}')
```

Expected nothing

Got:

Enthalpy of stream s2 is -124044

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 302, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
```

```
print('THE REACTION IS')
```

Expected nothing

Got:

THE REACTION IS

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 303, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
```

```
reaction.show()
```

Expected nothing

Got:

Reaction (by mol):

stoichiometry	reactant	X[%]
H2 + 0.5 O2 ->	H2O H2	70.00

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 304, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
Failed example:
```

```
print('AFTER NON-ADIABATIC REACTION')
```

Expected nothing

Got:

AFTER NON-ADIABATIC REACTION

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 306, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
```

Failed example:

```
s1.show()
```

Expected nothing

Got:

```
Stream: s1
```

```
phase: 'l', T: 298.15 K, P: 101325 Pa
```

```
flow (kmol/hr): H2    3
```

```
                O2   16.5
```

```
                H2O  1.01e+03
```

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 307, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
```

Failed example:

```
print(f'Enthalpy of stream s1 after non-adiabatic reaction is
{s1.H:.0f}')
```

Expected nothing

Got:

```
Enthalpy of stream s1 after non-adiabatic reaction is -101903
```

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 308, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
```

Failed example:

```
print('AFTER ADIABATIC REACTION')
```

Expected nothing

Got:

AFTER ADIABATIC REACTION

```
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 309, in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
```

Failed example:

```
reaction.adiabatic_reaction(s2)
```

Exception raised:

```
Traceback (most recent call last):
```

```
File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
```

```
    compileflags, 1), test.globs)
```

```
File "<doctest
```

```
thermosteam.reaction._reaction.Reaction.adiabatic_reaction1[20]>", line 1, in
<module>
```

```
    reaction.adiabatic_reaction(s2)
```

```
AttributeError: 'Reaction' object has no attribute 'adiabatic_reaction'
```

```
*****
```

File `"/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py"`,
 line 310, in `thermosteam.reaction._reaction.Reaction.adiabatic_reaction1`
 Failed example:

```
s2.show()
```

Expected nothing

Got:

```
Stream: s2
phase: 'l', T: 298.15 K, P: 101325 Pa
flow (kmol/hr): H2  10
                  O2  20
                  H2O 1e+03
```

File `"/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py"`,
 line 311, in `thermosteam.reaction._reaction.Reaction.adiabatic_reaction1`
 Failed example:

```
print(f'Enthalpy of stream s2 after adiabatic reaction is {s2.H:.0f}')
```

Expected nothing

Got:

```
Enthalpy of stream s2 after adiabatic reaction is -124044
```

File `"/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py"`,
 line 810, in
`thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3`

Failed example:

```
reaction = rxn.SeriesReaction([
```

Exception raised:

```
Traceback (most recent call last):
```

```
File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line  

1329, in __run
```

```
    compileflags, 1), test.globs)
```

```
File "<doctest
```

```
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3[4]>", line  

1
```

```
    reaction = rxn.SeriesReaction([
                                ^
```

```
SyntaxError: unexpected EOF while parsing
```

File `"/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py"`,
 line 812, in
`thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3`

Failed example:

```
rxn.Reaction('2CH4 + 3O2 -> 2CO + 4H2O', reactant='CH4',
```

```
X=0.7),
```

Exception raised:

```
Traceback (most recent call last):
```

```
File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line  

1329, in __run
```

```

        compileflags, 1), test.globs)
    File "<doctest
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3[5]>", line
1
    rxn.Reaction('2CH4 + 3O2 -> 2CO + 4H2O',          reactant='CH4',
X=0.7),
    ^
IndentationError: unexpected indent
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 813, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    rxn.Reaction('2CO + O2 -> 2CO2',          reactant='CO',
X=0.1)
Exception raised:
Traceback (most recent call last):
  File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
    compileflags, 1), test.globs)
  File "<doctest
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3[6]>", line
1
    rxn.Reaction('2CO + O2 -> 2CO2',          reactant='CO',
X=0.1)
    ^
IndentationError: unexpected indent
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 814, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    ])
Exception raised:
Traceback (most recent call last):
  File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
    compileflags, 1), test.globs)
  File "<doctest
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3[7]>", line
1
    ])
    ^
IndentationError: unexpected indent
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 818, in

```



```

thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    reaction(s1)
Exception raised:
    Traceback (most recent call last):
      File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
      compileflags, 1), test.globs)
      File "<doctest
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3[11]>", line
1, in <module>
      reaction(s1)
    NameError: name 'reaction' is not defined
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 819, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    reaction.adiabatic_reaction(s2)
Exception raised:
    Traceback (most recent call last):
      File "/Users/yalinli_cabbi/anaconda3/lib/python3.7/doctest.py", line
1329, in __run
      compileflags, 1), test.globs)
      File "<doctest
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3[12]>", line
1, in <module>
      reaction.adiabatic_reaction(s2)
    NameError: name 'reaction' is not defined
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 820, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    print('AFTER NON-ADIABATIC REACTION')
Expected nothing
Got:
    AFTER NON-ADIABATIC REACTION
*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 821, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    s1.show()
Expected nothing
Got:
    Stream: s1

```

```

phase: 'l', T: 298.15 K, P: 101325 Pa
flow (kmol/hr): CH4  5
                  O2  100
                  H2O 1e+03

```

```

*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 822, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    print('AFTER ADIABATIC REACTION')
Expected nothing
Got:

```

```

    AFTER ADIABATIC REACTION

```

```

*****
File "/Users/yalinli_cabbi/thermosteam/thermosteam/reaction/_reaction.py",
line 823, in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
Failed example:
    s2.show()
Expected nothing
Got:

```

```

    Stream: s2
    phase: 'l', T: 298.15 K, P: 101325 Pa
    flow (kmol/hr): CH4  5
                    O2  100
                    H2O 1e+03

```

```

*****
3 items had failures:
  10 of 17 in
thermosteam.reaction._reaction.ParallelReaction.adiabatic_reaction2
  14 of 23 in thermosteam.reaction._reaction.Reaction.adiabatic_reaction1
  10 of 17 in
thermosteam.reaction._reaction.SeriesReaction.adiabatic_reaction3
***Test Failed*** 34 failures.

```

In [3]: