

Hypy - A Python package for the interpretation of hydraulic tests in wells

From Loïc Pianaro, academic year 2017/2018

PROBLEMATIC

Hydraulic tests are field experiments allowing to estimate the hydraulic properties of aquifers. They can be interpreted using analytical solutions and computer codes. The aim of the project was to develop an open source Python package to conduct such interpretations.

RESULTS

Hypy is a new Python package inspired from the Hytool matlab toolbox. Hypy functionalities have been tested and validated by comparison with Hytool. Hypy also features a User Guide describing how to use and install the package. Hypy is simple to use and straightforward.

Drilling

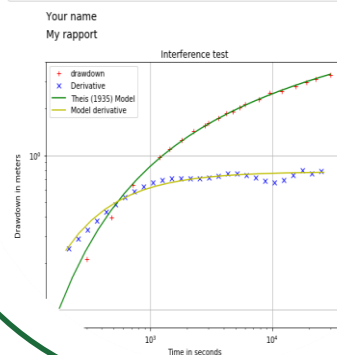


Time : (s)	Drawdown : (m)
180	0.09144
300	0.21336
480	0.39624
720	0.64008
1200	0.97536

Field data

```
... s = measured drawdown
... q = pumping rate
... r = distance from the pumping well
... title = Title of the figure
... description:
... Produces the final figure and results for Theis model (1935).
... See also: ths_dmo, ths_din, ths_gss

]: hp.ths.rpt(p,t,s,d,'ths',Author='Your name',title = 'Interference test', Rapport =
'pdf')
```



Interpretation of the data

Hypy allows to interpret efficiently and interactively field data to estimate the hydrodynamic properties of rocks. So far, only the most current and usual analytical models are available. The package is designed to evolve as new hydraulic functions are added to it.

To download Hypy: <https://github.com/UniNE-CHYN/hypy>

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