

Pyrolysis *is NOT a* Technology



APChemi podcast video #4

15-20

technology packages
make a pyrolysis plant.

12 patents | 50+ projects

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A pyrolysis plant is more than a reactor.

The packages cover four stages:

- 1 **Prepare and feed the raw material.**
- 2 **Heat the feedstock inside the reactor.**
- 3 **Handle the carbon, vapours and gas.**
- 4 **Upgrade the products for the buyer.**

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Prepare and feed the raw material.



Shredding

Get the required material size.



Drying

Reduce moisture where needed.



Conveying

Move material to the reactor.



Airlock feeding

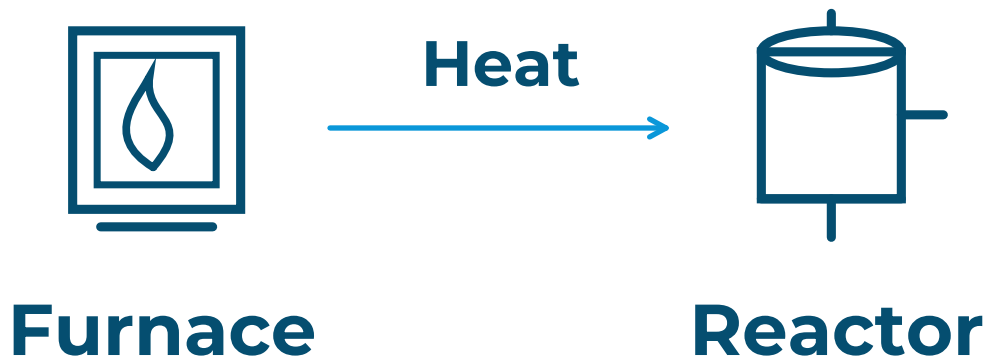
Feed the reactor through an airlock.

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Reactor and Furnace

The furnace, reactor and moving parts must work together.



Shaft seals + augers

Rotary Kilns in some cases

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Handle the carbon, vapours and gas.



Carbon

Discharge and cool safely.



Vapours

Keep lines clear;
condense in stages.



Gas

Store and use as fuel.
Scrub. Recover waste heat.

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Upgrade pyrolysis end products.

Making oil or carbon is not enough.



Pyrolysis oil

Meet the refinery buyer's requirements.



Biochar

Match the intended soil or application.



Recovered carbon black

Upgrade carbon from tyre pyrolysis.

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Most of pyrolysis plant development is engineering effort.

Knowing the pyrolysis concept is only the starting point.

5% concept

95% engineering



10,000-30,000

**engineering-hours /
pyrolysis-project**

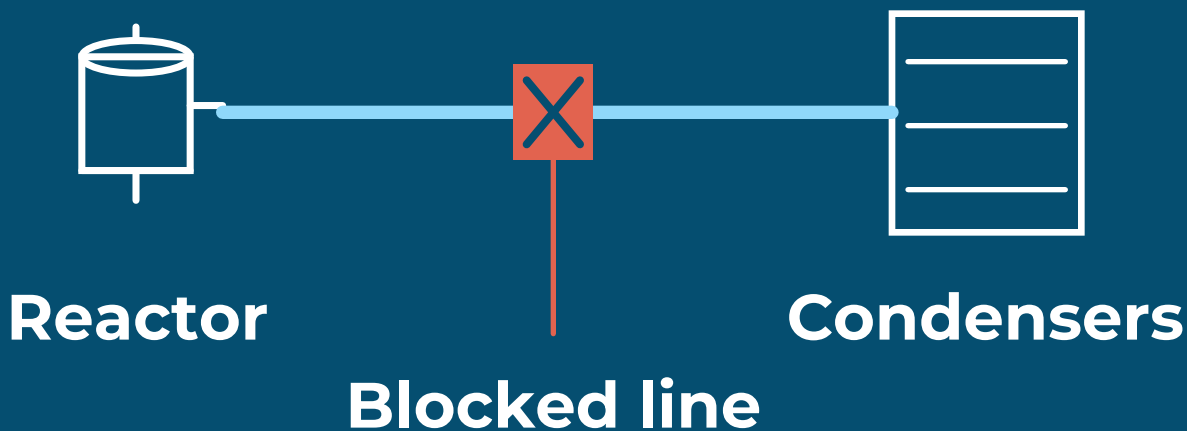
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WHY INTEGRATION MATTERS

If one technology package fails, the whole pyrolysis plant is at risk.

A clogged vapour pipeline is one such weak link.



Every connection needs engineering.

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Before you buy, check who will engineer it.

- 1 Which technology packages can you engineer in-house?
- 2 Who will engineer the remaining technology packages?
- 3 Who will make 15-20 technologies work together as pyrolysis plant?

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WHO BRINGS IT ALL TOGETHER?

An owner's engineer brings the packages together.

APChemi combines owner's engineering with plant simulation.

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See the full explanation.

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