



PYROHGEN

FLARE GAS CONVERSION INTO HYDROGEN USING PYROLYSIS

A SUSTAINABLE PATHWAY FOR FLARE GAS UTILIZATION

PyroHgen® for oil & gas companies



Over 150 billion m³ of associated petroleum gas are flared annually which can be converted into hydrogen. PyroHgen equipment can turn flare gas into hydrogen and solid carbon:



Flare Gas Overview:

This gas contains hydrocarbons like methane, ethane, propane, which are highly reactive and a potential resource.

Hydrogen's Role in Clean Energy:

Hydrogen is a clean, versatile energy carrier, vital for reducing greenhouse gas emissions in power, industry, and transportation.

Methane (CH ₄)	40-75%
Ethane (C ₂ H ₆)	15-25%
Propane (C ₃ H ₈)	5-10%
Butane (C ₄ H ₁₀)	2-8%
Pentane and heavier C _n H _n	1-5%
H ₂ , CO, CO ₂ , H ₂ S, N ₂ , O ₂	2-10%

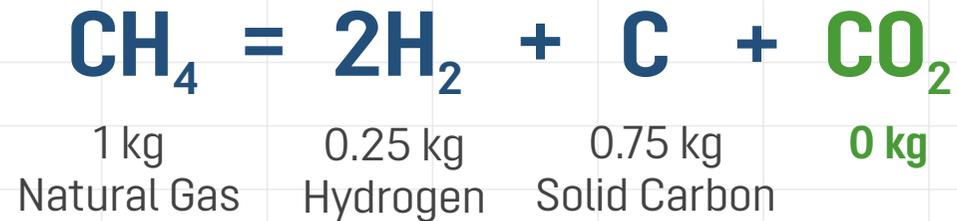
What is Pyrolysis?

Definition and Basic Concept:

PyroHgen[®] is the thermal decomposition of organic material at high temperatures (up to 1500°C) in the absence of oxygen.



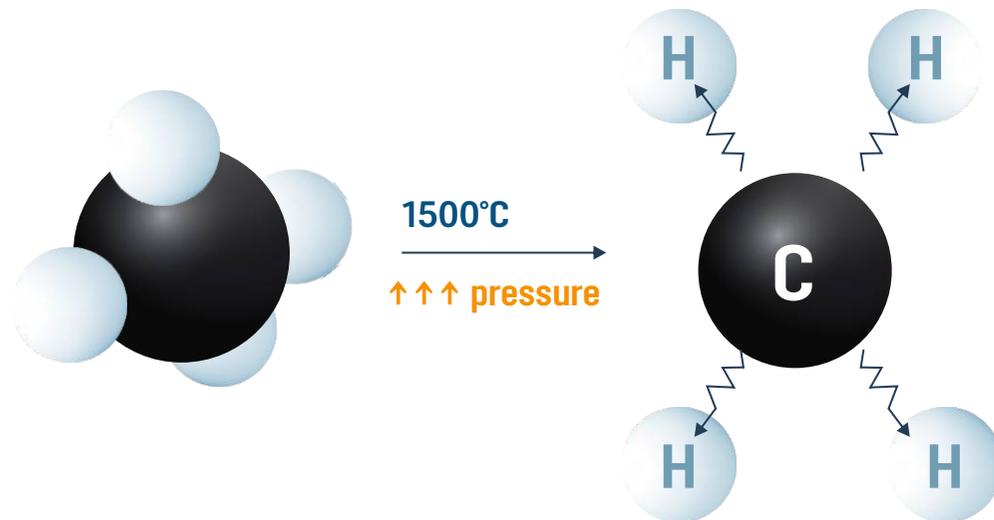
Modular pyrolysis reactor



It breaks down hydrocarbons into smaller molecules, yielding hydrogen-rich gas and solid carbon by-products

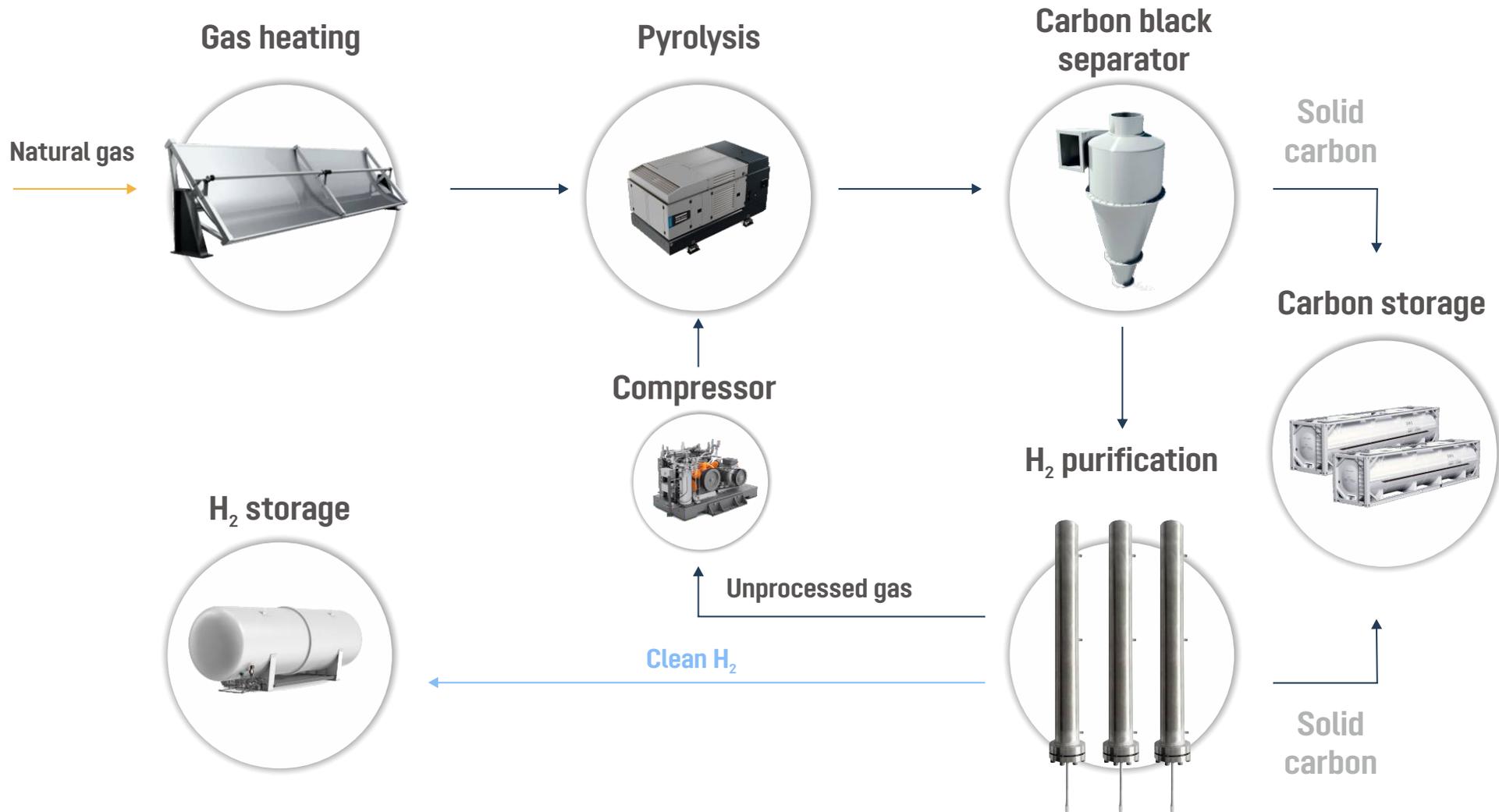
Why Pyrolysis for Flare Gas?

Pyrolysis converts flare gas directly into hydrogen without generating CO₂, producing solid carbon



PyroHgen® Process for Flare Gas Conversion

Overview of the Pyrolysis Process:



PyroHgen® modular units can be installed at:



HYDROGEN FUELING STATIONS

Producing hydrogen at the place of consumption we mitigate the transportation problem and significantly reduce the cost



OFF-SHORE OIL RIGS

Converting APG into hydrogen at the off-shore rigs will make economically sustainable for oil&gas companies



PyroHgen® modular unit



REMOTE AREAS WITHOUT INFRASTRUCTURE

PyroHgen can offer solutions of hydrogen and carbon black use at any area natural gas can be produced



STEEL MANUFACTURES

Modular units can be connected together to meet high hydrogen need of such industries like steel production



PYROHGEN

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