PTR TECHNOLOGY

PATENTED COMPLEX ENERGY SOLUTION

PTR technology, working on the principle of slow thermal decomposition represents efficient and environmentally friendly way of using various kinds of organic materials, especially waste.

INPUT > PTR TECHNOLOGY > RESULTING PRODUCTS

- Tyres and waste rubber
- Agricultural waste, biomass
- Municipal waste
- Plastics
- Sewage sludge
- Contaminated soil

ELECTRICITY / FUEL / HEAT

PTR TECHNOLOGY

COMPREHENSIVE TURN-KEY SOLUTION

The intention of the PTR comprehensive energy solution is always to design for the future operator a turn-key utilization *(disposal)* of a particular input material *(waste)*, as well as to simultaneously design an effective energetic arrangement within the current use of PTR products *(fuels)* to drive a power unit. The PTR comprehensive solution, extended by energy module – cogeneration, will enable to create a completely self-sustaining system, independent of external energy supplies.

ADVANTAGES OF PTR COMPREHENSIVE SOLUTION

- **Container arrangement >** which is capacitively modular.
- **Semi-mobile >** enables a continuous and temporary operation at various locations according to needs (e.g. near landfill sites), or to purposefully use it as a local source for production of electricity and heat for companies, municipalities and micro-regions.
- **Energy self-sustaining >** can be installed even where there is no assured supply of electric current.

PTR solution + Cogeneration unit =

INDEPENDENT SOURCE OF ELECTRICITY AND HEAT

HEDVIGA GROUP

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PTR® 1000

HEDVIGA GROUP

ELECTRICITY & HEAT

MADE OF ORGANIC MATERIALS, PARTICULARLY WASTE

HEDVIGA GROUP, Inc. is a Czech company that has been engaged since 2012 in the development and offering a PTR comprehensive technological solution for the production of fuels, electricity and heat from organic materials, especially waste.

After completion of testing and implementing trial operation of PTR technology, it is currently in progress in London installation and putting into operation a complex PTR technology solution 1000 kW6 processing waste rubber.

Within the frame of this London installation, the PTR technology solution 1000 kW6 is supplemented by power grid cogeneration units for liquid and gaseous PTR fuels and also by end technology for briquetting carbonaceous material and steel cord.

The term of the trial operation is set for the second quarter of 2016.

PTR® 1000

ENGIV2016

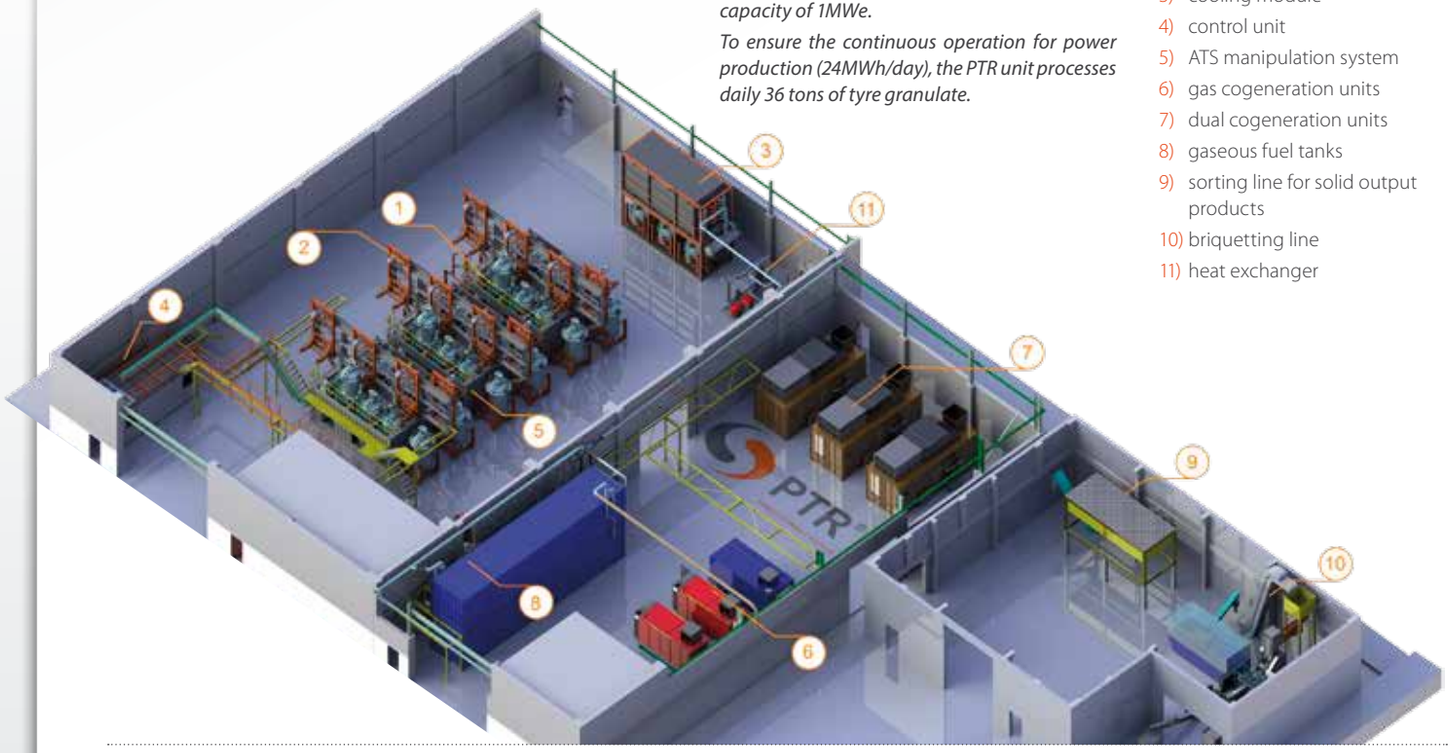
VISUALIZATION OF
PARTICULAR PTR SOLUTION

PTR COMPREHENSIVE ENERGY SYSTEM 1000 KW6 CONSISTS OF SEVERAL MODULES:

The PTR 1000 KW6 uses rubber granulate to produce gaseous fuel, which serves as propulsion for cogeneration units at the installed electrical capacity of 1MWe.

To ensure the continuous operation for power production (24MWh/day), the PTR unit processes daily 36 tons of tyre granulate.

1) PTR unit – 6 PTR modules
2) handling crane system
3) cooling module
4) control unit
5) ATS manipulation system
6) gas cogeneration units
7) dual cogeneration units
8) gaseous fuel tanks
9) sorting line for solid output products
10) briquetting line
11) heat exchanger



The actual process of slow thermal decomposition *(PTR)* takes about 2–3 hours and is proceeded in a closed system without air access. The PTR process itself is thermally stable and during the operation it continuously generates from the input charge **three output fractions: gaseous, liquid and solid.** Depending on the end use of these fractions, the PTR process outputs are certified as fuels, e.g. HEDGAS (*PTR gas),* HEDOIL *(PTR oil)* and HEDCARB *(PTR carbon).* *

* HEDGAS, HEDOIL and HEDCARB are trademarks of certified fuels.

ELECTRICITY & HEAT
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