

P2P System

Transformation of plastics
Into petrol and other fuels

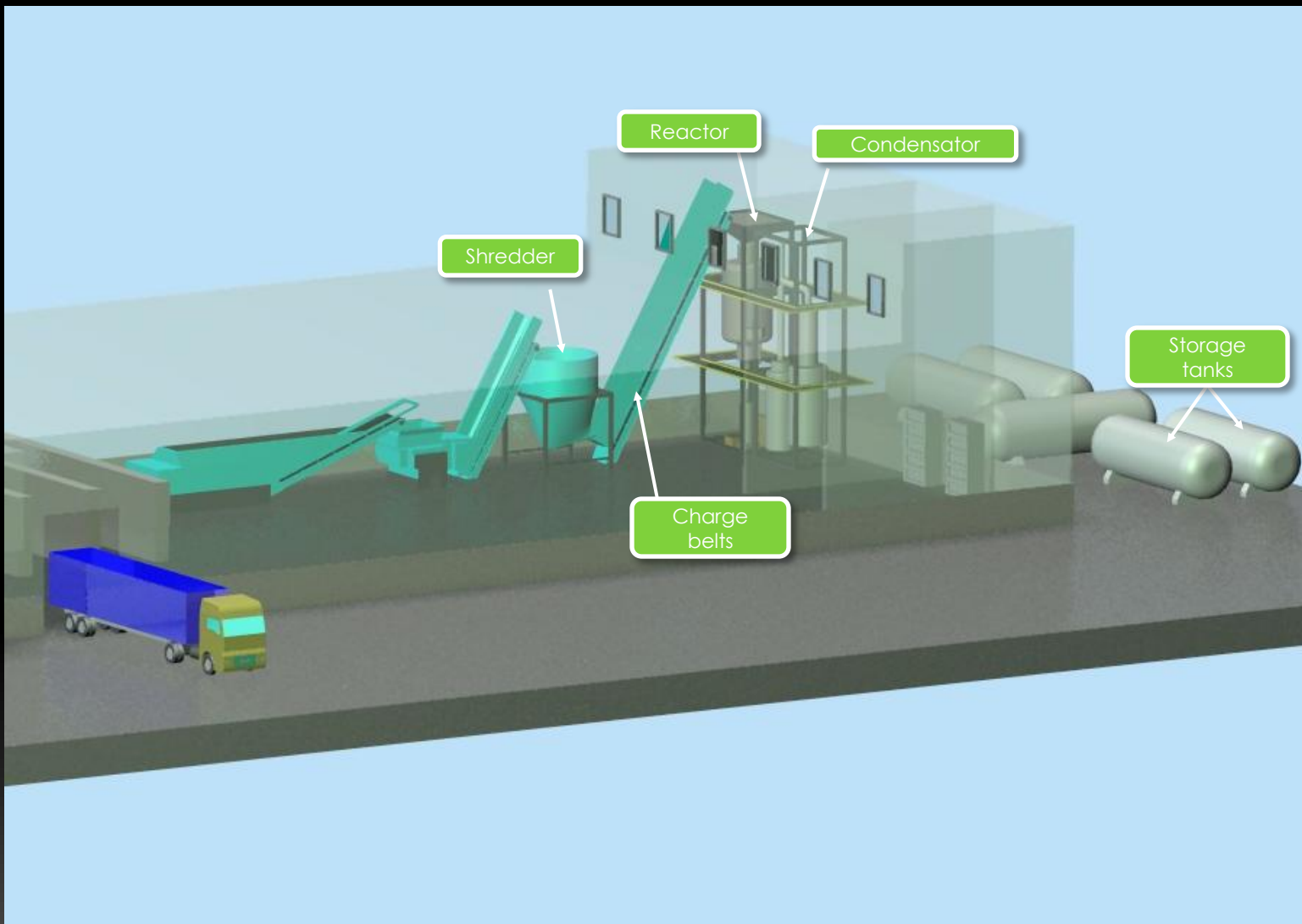


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Shredding and Recycling Machineries

TRANSFORMATION IMPLANT



Scheme of a transformation implant for for plastics into petrol and other fuels

System Description



- Plastic materials are transformed into petrol and other high quality fuels
- A transformation unit is made up of 2 columns – the reactor and the condensator – together with a refining implant and suitable storage tanks
- A transformation unit can treat 5, 7,5, 25, 100 or 150 tons of plastic materials daily, depending on the model's capacities, producing abt. 1.100 lt of fuel for every ton treated.
- The fuels produced have got a steady quality, independently from the kind of plastics introduced and/or from their degree of pollution.
- The transformation wastes are recovered under the form of coke, which is appropriately cleaned from all possible polluting agent, in order to be used for energy production or as raw material.
- A complete system is extremely profitable (minimum functioning costs, complete energetic autonomy) and payble-off in less than 3 years.
- Emissions are far inferior in comparison to the limit imposed by the current european legislations
- Thanks to this system also MANY OTHER types of wastes can be processed, as listed ahead.

Treatable wastes

Plastic materials (producing different hydrocarbons) :

- Plastics of all kind (PP, PET, PE, HDPE, LDPE, PVC, ...)
- Plastics coming from Autoclave System (cf. document)
- Plastics coming from electronic wastes
- Plastics coming from medical wastes
- « Car-Fluff » (Plastics coming from cars demolition)

Organic materials (producing different gases and/or ethanole) :

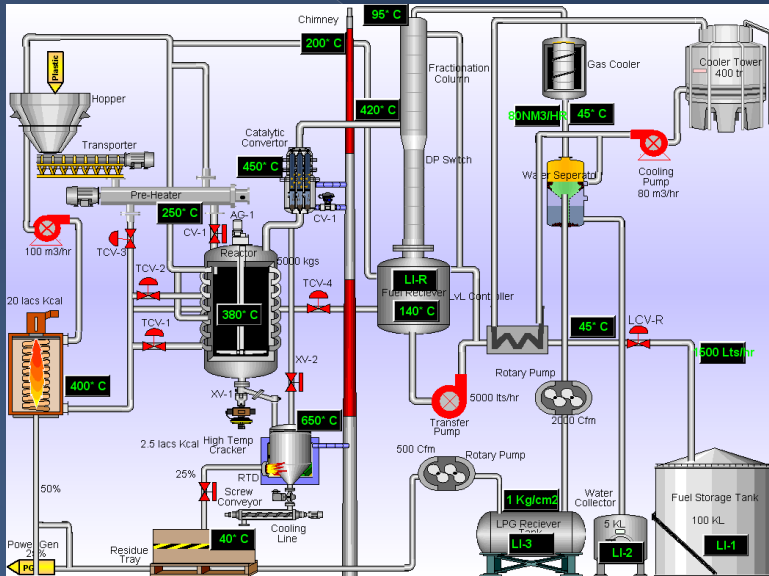
- Organic and vegetal wastes (wood, bunches, marc oil, straw etc.)
- SOF Stable Organic Fraction
- Dry animal dejections
- « Flock » coming from Autoclave System (cf. document)
- « Pulper » (paper production wastes)
- Muds from eputation stations (after flocculation)

Other (producing other fuels and different quantities of coke) :

- Tyres
- Tar and bitumen
- Exhausted motor oils (with the possibility of purifying them into simple
- Exhausted vegetal oils
- Animal fats and carcasses
- Some muds coming from refineries and reclaims



Detailed Procedure



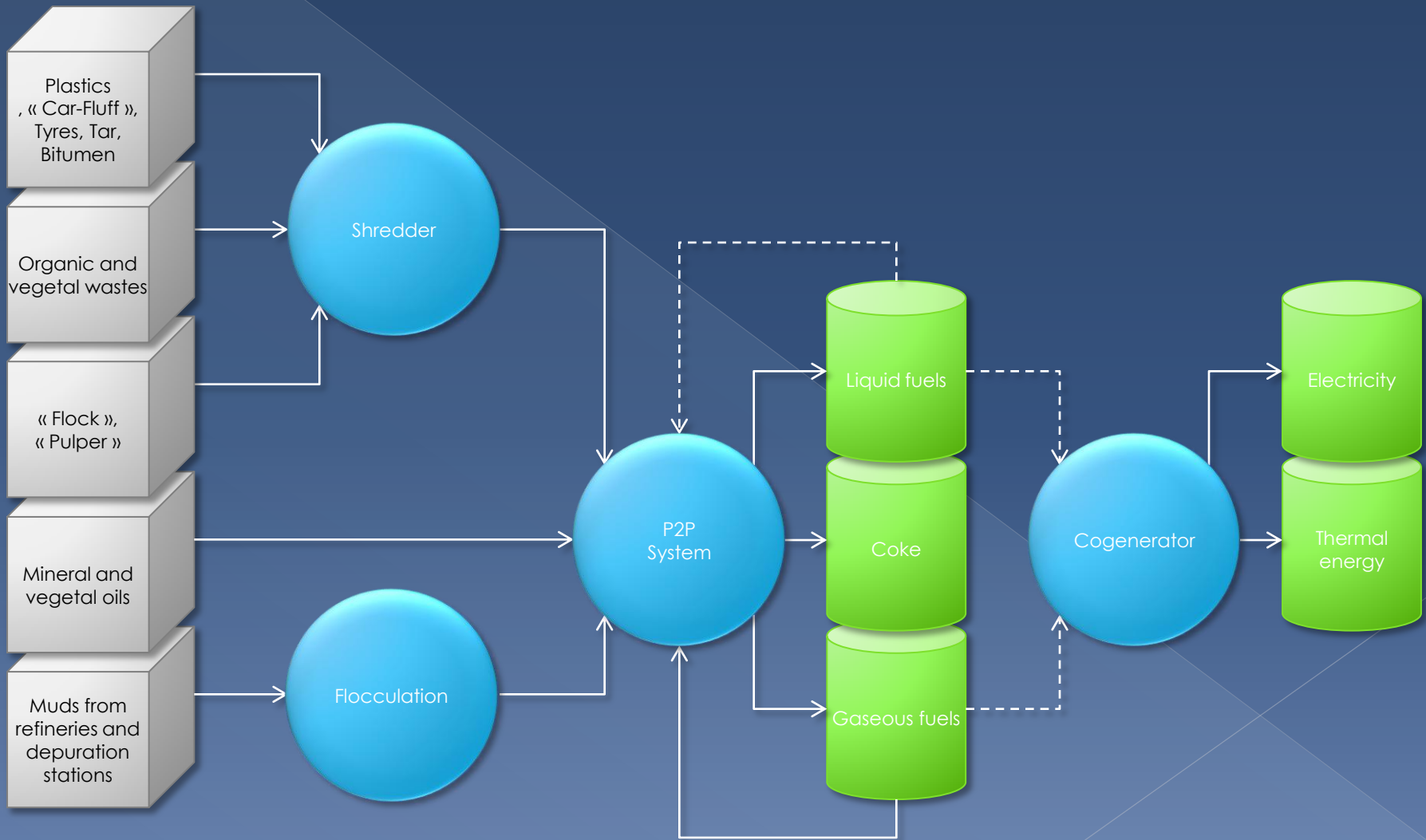
- The wastes, properly shredded, are introduced in steady stream into the reactor full with nitrogen (flame-retardant gas)
- The reactor's temperature is automatically set on, varying between 160°C of pre-heating to 600°C, depending on the different materials treated
- The gas produced reacts with the catalyst, which transforms the polymers into monomers through poli-cracking, producing some light gases
- The light gases are then condensed in a mix of different liquid fuels (Mazut=diesel oil, petrol, paraffin, heavy oils) which are then refined in order to be parted into the right tanks
- Non condensable gases are filtered before being re-used to feed the machinery
- The residuals produced from the reactor under form of coke are recovered in view of their further use for energy production or as raw material
- A different catalyst powder is necessary for every kind of wastes treated (sold into interchangeable cartridges at a fixed price of 0,22€ for every kg of wastes treated, including dues royalties)
- The installation of refining systems can be considered (if for instance You decide to transform all into energy... this can be done directly from Mazut!)
- The several sensors inside of the system allow for a real time control and regulation of the processes, with minimum human intervention
- A complete installation requires a surface of abt. 2 000m² and the presence of 2 workers for each 8 h turn
- Due to the system's modular conception , it is possible to review its characteristics to improve them and better respond to an increasing demand

Use of the fuels and the Coke








- The fuels produced are better in quality compared to their market equivalents (high heat power, very little presence of sulphur etc.)
- The fuels produced from plastic materials have got an absolutely steady quality (guaranteed from contract) independently from the input quality : only quantity can change!
- The liquid/gaseous fuels produced can be used inside of a generator to produce electricity and thermal energy. If they are used as fuels, instead, in some Countries there is a special excise tax, which is not due if the use is limited to the machinery owner's needs
- The transformation wastes under form of coke are mainly made up of coal (when coming from plastics, the coke Kcal/Kg value is equal to 6.078)
- The coke can be re-used as air filter, as anti-radioactive shield, for production of tyres not for high speed. After the needed chemical analyses assuring the absence of polluting agents, it can also be used as fertilizer and/or made compact in brichetti and used as industrial fuel...Per finire... lo si può usare in quanto carbone... or again, if duly shredded, you may to add to the diesel before to use it into the power generator!
- The P2P System has been recognized as one of the 7 best inventions for the year 2006-2007 from the Indian Commerce Chambers Federation (FICCI) and the IC² Institute of University of in Austin, though the « Indian Programme for Development and Innovation » of the aeronautic constructions society Lockheed Martin

Synthesis diagram



FISSORE Agency is distributor for :

	<ul style="list-style-type: none">➤ Automatic separation of MSW differentiated or not by Autoclave (with AeroThermal UK)➤ Bioreactors for 24 hours ready natural fertilizer (with ORGAplus-NL)➤ Transformation of Plastics into Petrole (P2P) (with Oil Field Tekniks / STEPS-INDIA)➤ FISSORE Agency is co-founder and Partner of VULCANES, and TRENARY Group Partner
	<ul style="list-style-type: none">➤ Dutch manufacturer of machines for the recycling industry since 1950➤ World Leader for shredders, punches, compactators, roll-cutters, bale presses, conveyors, selection installations, ... for Industrial and domestic wastes treatment
	<ul style="list-style-type: none">➤ World Leader for screening technology, number one in the United States➤ Pioneer in the field of conceiving, developing and supplying of innovative, reliable and convenient selecting and recycling installations.➤ It is part of the Bollegraaf Recycling Machinery Group since July 2001
	<ul style="list-style-type: none">➤ Shred and Sanitization Technologies for Medical wastes
	<ul style="list-style-type: none">➤ Shredders for all the materials

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