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NexGen's **WASTE TYRE PROCESSING**

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Renewable Green Energy

The chemical composition of tires makes them valuable resource and long-term solution would be to extract the resources from the tires having on mind environmental impact and financial justification of the process.

One of the worst todays solid waste problems in the World is continues accumulation of waste tyres due to the complex structure of tyres what makes them difficult to recycle. They are few existing methods of tyre treatment, partly problematical and limited, such as: incineration, retreading, grinding, shredding, pyrolysis etc. All of them are more or less non sustainable solutions.

New Modified Pyrolysis, NexGen's process

Production plant for recycling Pyro NexGen is the ultimate recycling facility for waste car tyres and plastics. The production process is completely environmentally clean, without neither emission of waste gas nor waste materials and by-products. The entire production process has been branded as "green" and "environmentally safe", so it recycles 100% of usable material. Diesel and gasoline obtained from the system are 100% "Renewable source of Green Energy".

The overall objective of the project is to improve the environmental / human environment, through recycling, obtaining services to collect solid waste, improving sanitary and health conditions in the EU.

Pyro NexGen shall work much better, more efficient, quieter, cleaner and with lower maintenance cost. The System is suitable for 24-7 working hours or work in different shifts. Operation and management request less labour since it is fully self-operated and controlled by computer.

Traditional Pyrolysis

Is an old process of treating rubber materials by heating them in oxygen free ambient - vacuum. One of the problems of the process is difficulty to control basic parameters as temperature and pressure bringing as result quite low quality products and huge energy consumption not justifying main target – economy.

Crucial advantages of production facility for recycling Pyro ATM:

- **Low operational costs**
- **High profit**
- **Quick return of investment (ROI)**
- **Zero environmental impact***

**Gas is being passed through the security device and passes the torch. Percentage of combustion gas is 100%, and during the process itself waste gases are burnt as well as surplus in fuel production. Torch dust is treated by ZTC desulphurization and dust filter, which limits the amount of dust in the exhaust gases. The process meets the GB-2001 standards.*

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Green Reverse Technology

Energy Efficient - Heating is required to run the pyrolysis process, which may be electricity, gas or any other type of heating. Roughly, the system needs only the first 40 minutes of external heating, after the pyrolysis process has already begun, system alone supplies gas to run. Very little energy is required as gas and fuels derived from the output are used again at the input so we have a self-sustaining process.
Elimination of pollution - a system that allows to re-use all the pollution in maximum by filtering, absorbing and re-burning.

Quiet System

New NexGen system works quieter than the previous one with fewer moving mechanical parts. The system could obtain the necessary permission for limited limit noise from any local authorities of the countries around the world.

Pollution Free

NexGen system produces no smoke, no smell, no other-generated pollution, and waste discharges. The system is equipped with automatic separation and filtration.

For example, when the system is filled with raw materials such as waste plastics, tyres, foam, chemical garment fibre, rubber and all kinds of waste oil, etc. without cleaning and sorting, the system can produce a standard gasoline, diesel, oil, natural gas and carbon. Natural gas which is returned to the reactor and used for heating, can also be collected and used for other purposes.

Raw materials

Raw materials which are suitable for machine:

- **Waste tyre**
- **Waste plastic**
- **Used oil**

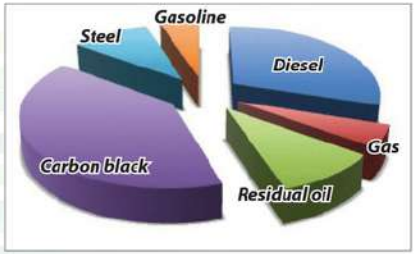
There are several models available, depending on the raw material for the system. Customers need to determine what will their project be, so we can come out with the right model.

Waste tyre

The production output from the main raw material for recycling of car tyres is as follows:

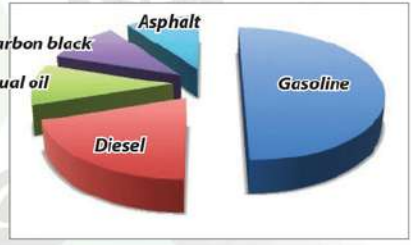
- **Diesel 30%**
- **Gasoline 5%**
- **Residual oil 10%**
- **Carbon black 40%**
- **Steel 10%**
- **Waste gas for burning 5%**

Apart from waste car tyres, raw materials for recycling are also all kinds of waste products from tyre and plastic.



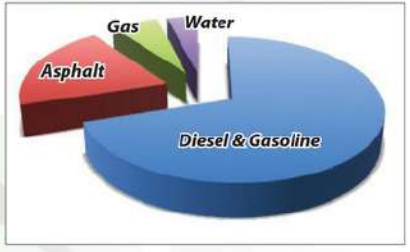
Waste plastic

- Gasoline 50%
- Diesel 20%
- Residual oil 10%
- Carbon black 10%
- Asphalt 10%



Waste oil

- Diesel & Gasoline 70%
- Asphalt 20%
- Gas 6%
- Water 4%



Products of Pyro NexGen process

Carbon Black

It's very refined coal, Carbon black of high quality and/or can be of different class possible to be mixed with any other existing quality in order to adapt to various field of application, such as: asphalt industry, automobile industry, pharmaceutical, pigmentation, UV protection, printer cartridges etc.

Steel

One part of steel coming from wire reinforcement in the tire result as clean and non-oxidized steel separated by magnet technology during the process and can be sold as high quality scrap steel. Another part of steel comes from the pre shredding operation with tire sidewall remover extracting threads from tire perimeter.

Gas

Considered as natural gas (methane, propane and ethane), half of the produced quantities goes back to the process taking part as main energizer of the plant and second half of produced gas can be stored and sold through market channels and distributors or could be used for electrical energy production, water heating or similar.

Oil

Heavy oil can be used as industrial oil, asphalt bitumen, as a raw material for production of chemicals, hydrocarbons, production of the new rubber.

Diesel & gasoline

Quality and Standard: Euro 4 - Euro 5

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Production capacity

Models of machines according to the filling amount of waste materials:

Pyro ATM 10
10 metric tons of cargo for each treatment in 24 hours
- Energy consumption - 44,6 kW
- Dimensions (footprint) - 350 m²

Pyro ATM 20
20 metric tons of cargo for each treatment in 24 hours
- Energy consumption - 60 kW
- Dimensions (footprint) - 450 m²

Pyro ATM 50
50 metric tons of cargo for each treatment in 24 hours
- Energy consumption - 70 kW
- Dimensions (footprint) - 650 m²

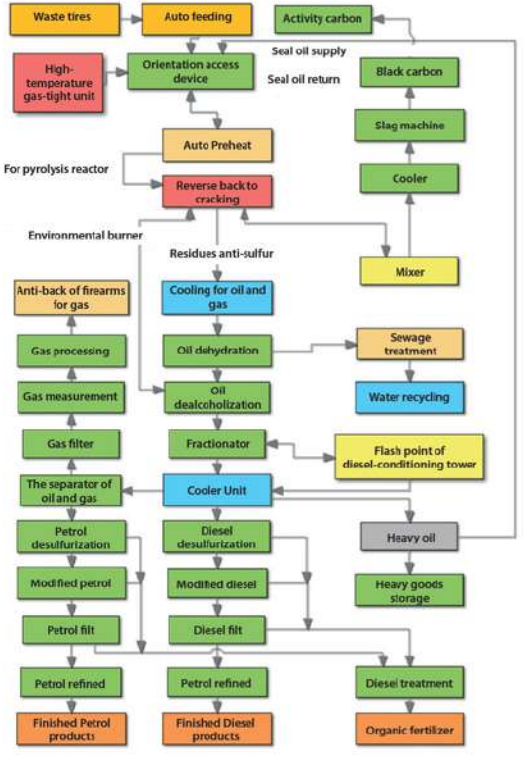
Certificates

TÜV SÜD ISO 9001

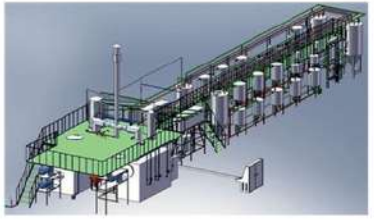
ISO 9001:2008 QUALITY ASSURANCE

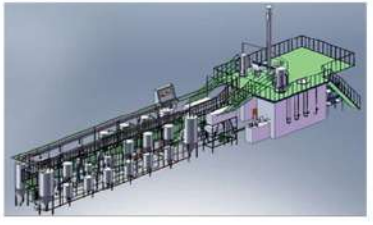
ISO 14001:2004 Certified Environmental Management System

NexGen's Waste Tyre Process



Facility scheme






NEXGEN GREEN TECHNOLOGY PROCESS

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UK, 10 tons, Plastic Waste

REFERENCES

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Brasil, 30 tons, Tires and Plastic Waste 2

REFERENCES

Croatia, 20 tons, Tires and Plastic Waste 1

Croatia, 20 tons, Tires and Plastic Waste 2

REFERENCES

Bosnia, 10 tons, Tires

Bosnia, 10 tons, Tires

REFERENCES

Qatar, 110 tons, Tires and Waste Oil
On Going Project

Qatar, 110 tons, Tires and Waste Oil
On Going Project

NEW PROJECTS TO BE EXECUTED 2022/2023

Serbia, 20 tons, Tires Waste

Kingdom of Saudi Arabia, 60 tons, Tires Waste

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