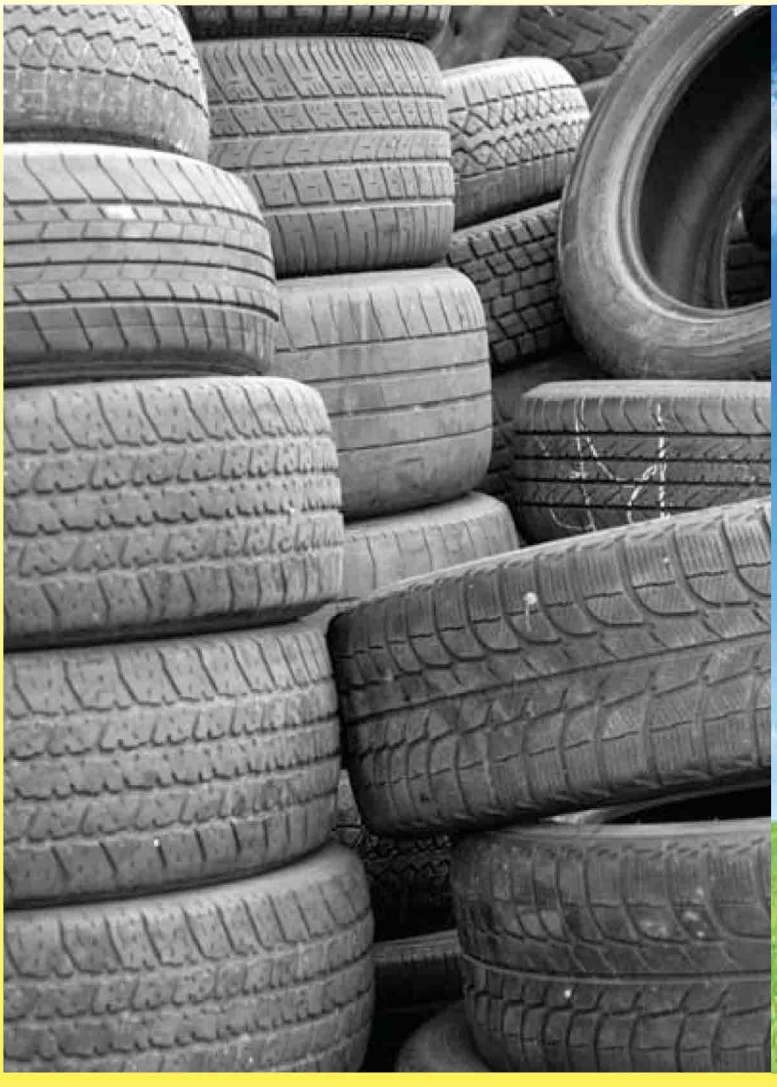

回收廢輪胎新的突破

THE NEW BREAKTHROUGH IN RECYCLING WASTE TIRES

廢輪胎熱裂解成裂解油, 碳黑, 和鋼絲

Recycling of used tires to Oil, Carbon black and wire by Vacuum Pyrolysis

揮王企業股份有限公司 TEL:07-8317878 FAX:07-8311789, 07-8224967
HWE WANG ENTERPRISES INC. E-mail:hwewang@ms3.hinet.net http://www.hwe-wang.com.tw

獨特的回收廢輪胎熱裂解系統恢復成氣化油, 碳黑, 和廢鋼
The unique Waste tire Pyrolysis system of recycling waste tires into recovered gasified oil,carbon black and steel scraps is:

密閉型 Closed
連續的 Continuous
經濟的 Ecological
安全的 Safe
有利潤的 Profitable
可使用在全世界 Applicable all over the world

回收後，生產的產品是可使用的，而且可供給市場上
Recycled output products are usable and marketable:

- 熱裂解恢復成氣化油，可以利用作為能源資源使用在燃燒引擎, 工業用的燃燒器，電廠和大型加熱系統
  Pyrolysis system recovered gasified oil can be used as an energy source in combustion engines, industrial burners, power plants and large-scale heating systems.
- 碳黑-可再使用於橡膠工業作為新橡膠或當作襯墊材料作為印刷和油漆產品
  Carbon black can be reused in the rubber industry for new rubber or, as a lining material in printing and paint production.
- 廢鋼可再使用於鋼鐵工業
  Steel scraps can be reused by the steel industry.

最近歐盟在2000/76/EC增加需要的規則並建立了從輪胎的燃燒製程型式和剩餘渣的含量均建立了嚴格的標準, 能使用輪胎作為固體燃料 , 有效的投資必需做到所產生大氣汙染的限制，焚化爐火力燃燒輪胎將被禁止.

Recently, the EU has increased the requirements in Directive 2000/76/EC and has established strict standards on the discharge of atmospheric pollution from these types of burning processes and on the content of the remaining slag. To be able to use tires as solid fuel, significant investments must be made to limit the atmospheric pollution they create. Burning tires in incineration plants will be halted.

在歐盟每年約產生6百萬公噸的更換廢輪胎
In the EU, close to 6 million tons of replaced waste tires are produced annually.

輪胎工業、汽車工業、環保人士和政府將使用本熱裂解氣化系統來處理廢輪胎
The tire industry, car industry, environment activists and governments will use the Pyrolysis system to manage the problem of waste tires.

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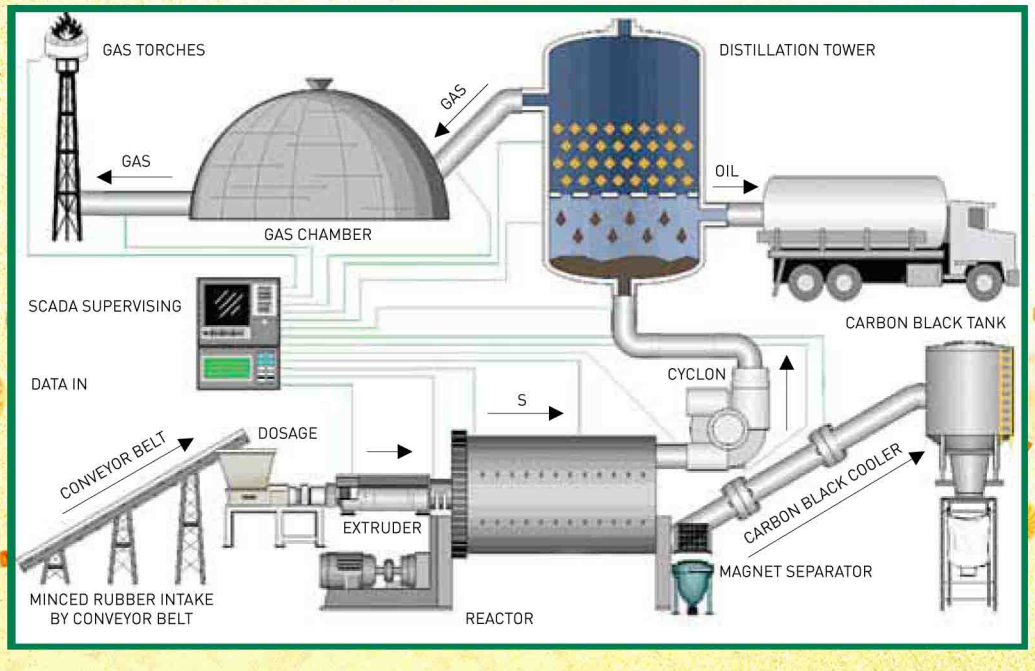
熱裂解氣化系統每年的產能
Yearly Capacities of the Pyrolysis Gasified system:

- 廢棄地面上輪胎入料：約8000T/年
  Input of waste ground tires: ca. 8,000 ton per year
- 恢復油的產生，約3百30萬公升/年
  Output of recovered oil: ca. 3.3 million litres per year
- 碳黑產出量：約360萬公斤
  Output of carbon black: ca. 3.6 million kg per year
- 廢鐵的產出：560T/年
  Output of steel: ca. 560 tons per year

熱裂解氣化系統包括下列配件組成
The Pyrolysis Gasified system consists of the following components:

- 使用預熱分配進料單元
  Dosing input unit with pre-heating
- 擠壓器
  Extruder
- 氣化反應器
  Gasified reactor
- 碳黑冷却輸送帶
  Carbon black cooler conveyor
- 鋼絲的電磁式磁選機
  Electro-magnetic separation of steel wiring
- 碳黑冷却槽和大型過濾袋
  Carbon black cooler tank and jumbo bag
- 回旋單元可作為瓦斯氣純化
  Cyclone unit for gas purificant
- 蒸餾柱
  Distillation column
- 恢復氣化油的冷却單元
  Cooling unit for recovered gasified oil
- 200立方米瓦斯槽
  200 m^3 gas chamber
- 瓦斯氣火炬
  Gas torches
- SCADA控制系統（電子、五金和軟體）
  SCADA Control System (electronics, hardware and software)



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熱裂解氣化系統的特性
Features of the Pyrolysis Gasified system:

- 系統的建造和設計-每天24小時/每週7天的生產
  System is built and designed for : 24/7 production
- 系統入料能力-20-24公屯廢輪胎
  Daily input capacity of system : 20 - 24 ton/day of waste tires
- 系統每天產能:10,000-10,500公升/天的氧化油和 10,000-11,000KG/天的碳煙
  Daily output capacity of system : 10,000 - 10,500 l/day of recovered gasified oil and 10,000 kg - 11,000 kg/day of carbon black
- 能源消耗:12KW/小時,運轉本系統穩定消耗
  Consumption of energy : 12 kw/h steady consumption of running system
- 最小需求人員:每班一個監督和1個工人
  Minimum needed crew : One supervisor and one worker per shift

氣化系統最小安裝需求
Minimum Installation requirements for the Gasified system are:

- 密閉的工業空間，20米長15M寬6M高
  Closed industrial space, 20 m length, 15 m width, 6 m height
- 氣室用的分料空間200立方米儲存筒
  Separated space for gas chamber for 200 m3 reservoir
- 最小尺寸電力供應40KW/小時作為起重預熱消耗（4小時）和12KW/小時運轉電力
  Electrical power supply in size of min. 40 kw/h consumption for start preheating (4hours), and 12 kw/h running power
- 恢復氣化油儲筒或油罐車，不在本供應之內
  Reservoir for recovered gasified oil (or oil truck tanker) is not part of the supply

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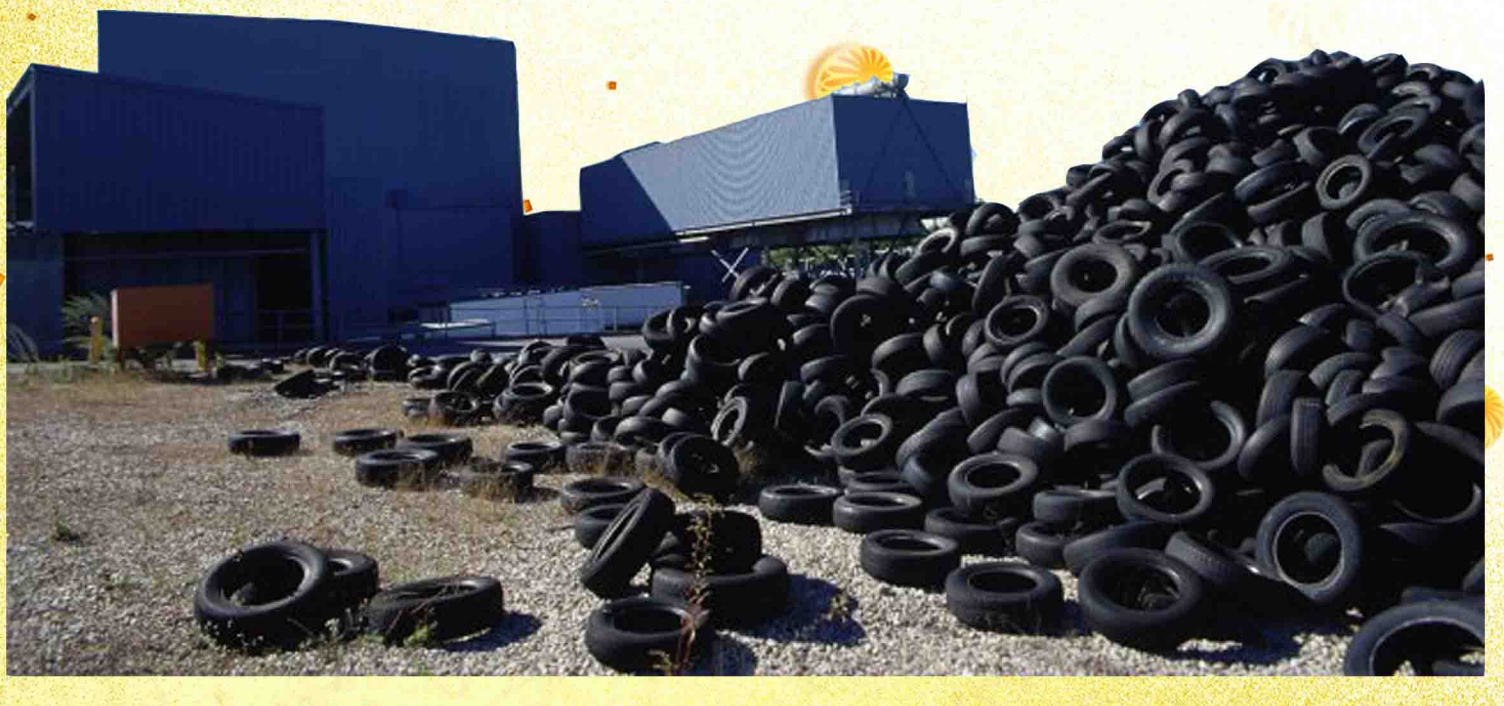
本熱裂解氣化系統的好處
Advantages of the Pyrolysis Gasified system:

- 高效益
  High Efficiency
- CE證書
  CE certificate
- 每班只需1個監督和1個工人
  Only one supervisor and one worker per shift needed
- 低操作成本
  Low operating costs
- 密閉，連續進料系統以增加效益
  Closed, continuous feed system with increased efficiency
- 適當尺寸和系統容量適合小型空間
  Optimal size and capacity of the system, suitable for smaller spaces
- 連續製程可確定輸出產品為高品質
  Continues process ensures high quality of output products
- 小能源消耗5-15KW
  Small energy consumption (5 - 15 kW)
- 二年保固
  Two-year warranty
- 維修服務, 每年4次，每次3天，每年共12天
  Maintenance service: four times a year for three days each; 12 days in total per year
- 可使用產品：回復氣化油, 碳黑和廢鋼
  Usable output products: recovered gasified oil, carbon black and steel scraps
- SCADA電子導引控制系統可透過網際網路進入和監控
  SCADA electronic guided control system, access and monitoring over the internet
- 沒有排出汙染物
  No polluting emissionss
- 快速投資回收(ROI)，歐洲只要2年
  Fast return of investment (ROI), only two years in Europe
- 本系統已準備來作業，在同一代連結(有3種型式產出, 電氣、熱和冷却)
  System is ready to work in cogeneration link (three types of generation: electricity, heating and cooling)



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