



面向全球的废物处理解决方案

在过去的二十余年里，城市中人均产生的固体废物增加了一倍有余，处理这些废物的费用却在同期内呈指数增长。

废物处理已成为一个全球性的问题，急需发掘一个全球性的解决方案。

污染和废物的预防与减少

全球共识的方法是以焚烧回收对废物进行最后处理，例如使用废物能源化（WTE）设备，它会产生电能和/或区域热能。

但是，WTE 设备有一些局限性：

居住在 WTE 工厂附近的居民不愿意它被建在小区内 (NIMBY)，他们会持强烈反对意见。

在使用前，多数现有 WTE 设备需要进行制粒，代价十分昂贵。为避免这类开销，许多 WTE 工厂在选料后将可回收废物压缩以降低仓储成本，或直接运至垃圾处理厂掩埋，但这要花费很高的运费和处理费。

可燃废物的产出方发现，对其废物进行制粒无经济效益可言，他们不得不将废物打包，通过缩小其体积降低掩埋费用，进而降低成本。

这样，采用 RDF 处置方案进行掩埋时，会额外产生废物管理成本，最终导致放弃选料。

此解决方案以“范式转移”理念和新兴生态技术为基础 所用的业务模型同时解决了 周边环境和土地/空气污染的两重问题。

WEST 的专利解决方案为货柜船或其它大型商船配备了蒸气推进系统，它由垃圾衍生燃料提供动力。

燃烧废物产生的能量用作推进力，并为船体提供所需的电能和热能。

船成为焚烧回收的移动处理系统，既减少了废气排放，又使废物处理远离居民区，改善了居住环境安全性。



A global solution for the reduction of waste

Over the past twenty years the per capita production of municipal solid waste has more than doubled and in the same time frame, the cost of disposing of this waste has increased exponentially.

Disposal of waste is a global problem that requires a global solution.

Prevention and reduction of pollution and waste

The universally accepted technical solution is to close the waste treatment cycle by utilizing a thermal recovery process, for example, waste-to-energy (WTE) facilities which produce electricity and/or district heating.

However, WTE facilities have several constraints:

They are strongly opposed by residents in the proximity who do not want a WTE plant in their neighborhood (NIMBY).

Many existing WTE facilities require costly pelletizing before use. To avoid such costs, many WTE plants compact recyclable waste after selection to reduce storage costs or send it directly to landfills with the associated high costs for transport and handling.

In order to reduce costs, producers of combustible waste, that find it economically disadvantageous to pelletize its waste are forced to bale it, reducing volume to minimize the landfill costs.

This results in an un-economic waste management system with RDF disposal in a landfill and eventually abandonment of the selection process.

The solution lies in a paradigm shift, a new eco-technology and a business model which resolves the dual problems of proximity and land/air pollution.

WEST's patented solution is to equip a container ship or other large merchant vessel with a steam propulsion system driven by an Refuse-Derived Fuel (RDF) fired boiler.

The energy produced by burning the waste would be used for propulsion and to satisfy all of the electrical and thermal requirements of the ship.

The ship becomes a mobile treatment system for thermal recovery, both reducing air emissions and removing them from inhabited areas thus improving environmental security.