

AN EVER-EXPANDING COLLECTION AND RECYCLING PROGRAMME.

■ **Polystyrene moulders** recycle most of their waste in-plant or through a specialist recycler. The remainder (less than 1%) is disposed of in landfill.

■ **Consumer waste**, the largest source of waste, is almost all disposed of in landfill. Only a limited range of products are currently being recycled, such as foam produce boxes and coat hangers. Other products, such as cups are being added as recycling schemes get started. In the USA, the National Polystyrene Recycling Company has 8 polystyrene recycling plants operating and aims by 1995 to recycle 25% of all polystyrene in fast food applications.

In Australia, Full Cycle Plastics currently recycles coat hangers and is expanding its plant to recycle other consumer wastes. Key issues are the cost of collection and how best to use recycled materials.

Recycling and collection is continually being increased and these challenges are being overcome.

A directory of recyclers is available from state offices of the Plastics Industry Association.

POLYSTYRENE RECYCLING - A SIMPLE AND ENVIRONMENTALLY SOUND PROCESS.

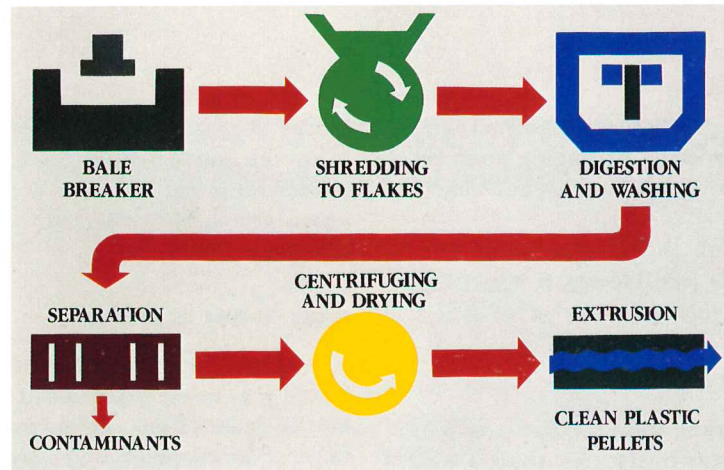
Q *How is Polystyrene recycled?*

A Basically the recycling process starts by taking used polystyrene and chopping it into small pieces which are then washed.

The clean polystyrene is melted at about 200°C. mixed thoroughly in an extruder and forced through dies into spaghetti like strands.

These strands then cool and harden and are cut up into pellets.

This recycled material has similar physical properties to virgin polystyrene and is shipped to companies which



mould it into final products. Current health regulations prevent its use in contact with food.

Q *Is recycled Polystyrene useful?*

A Yes. There are many uses for recycled polystyrene. These include the manufacture of office accessories, food serving trays, refuse containers, wall and building insulation and protective packaging.

Q *Are there any other uses for recycled Polystyrene?*

A Recycled polystyrene is also being mixed with other recycled plastics to produce a synthetic timber for playground equipment, traffic signs and barriers, park benches and marine construction materials.

Q *What efforts are being made to recycle Polystyrene in Australia?*

A The Australian polystyrene producers, through the Polystyrene Producers Council, have a number of schemes involving major retailers and users. They are also working with local and state governments in community collection schemes.

The success of these efforts will depend on the co-operation and participation of consumers, government officials and manufacturing companies.

Q *Is incineration a safe means of disposal of Polystyrene?*

A In many overseas countries polystyrene is recycled through incineration of municipal waste for energy recovery.

The burning of polystyrene is no more hazardous than combustion of many natural organic materials. Polystyrene consists solely of carbon and hydrogen. When combustion is complete, water and carbon dioxide are given off, leaving trace levels of ash, the same combustion products as from paper or wood.

While some polystyrene in medical and municipal wastes is currently incinerated in Australia, the energy recovery option has not yet been implemented.

Q *Does Polystyrene help the incineration process?*

A Yes. When incinerated, polystyrene produces energy which compares favourably with coal and oil. Because of its high fuel value, polystyrene in properly designed incinerators helps to burn wet garbage more efficiently, and maintain the high burning temperatures necessary for safe combustion.

The incineration of plastics can also generate energy and this potential is already being harnessed in some overseas countries, particularly in Western Europe, The United States and Japan.