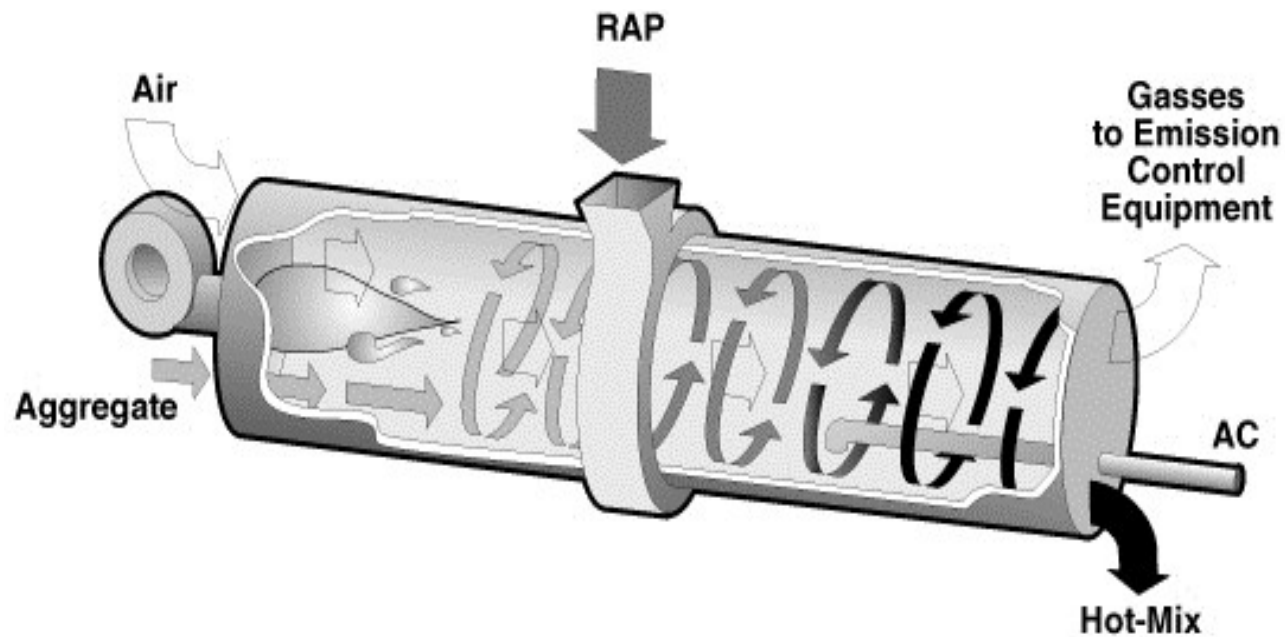
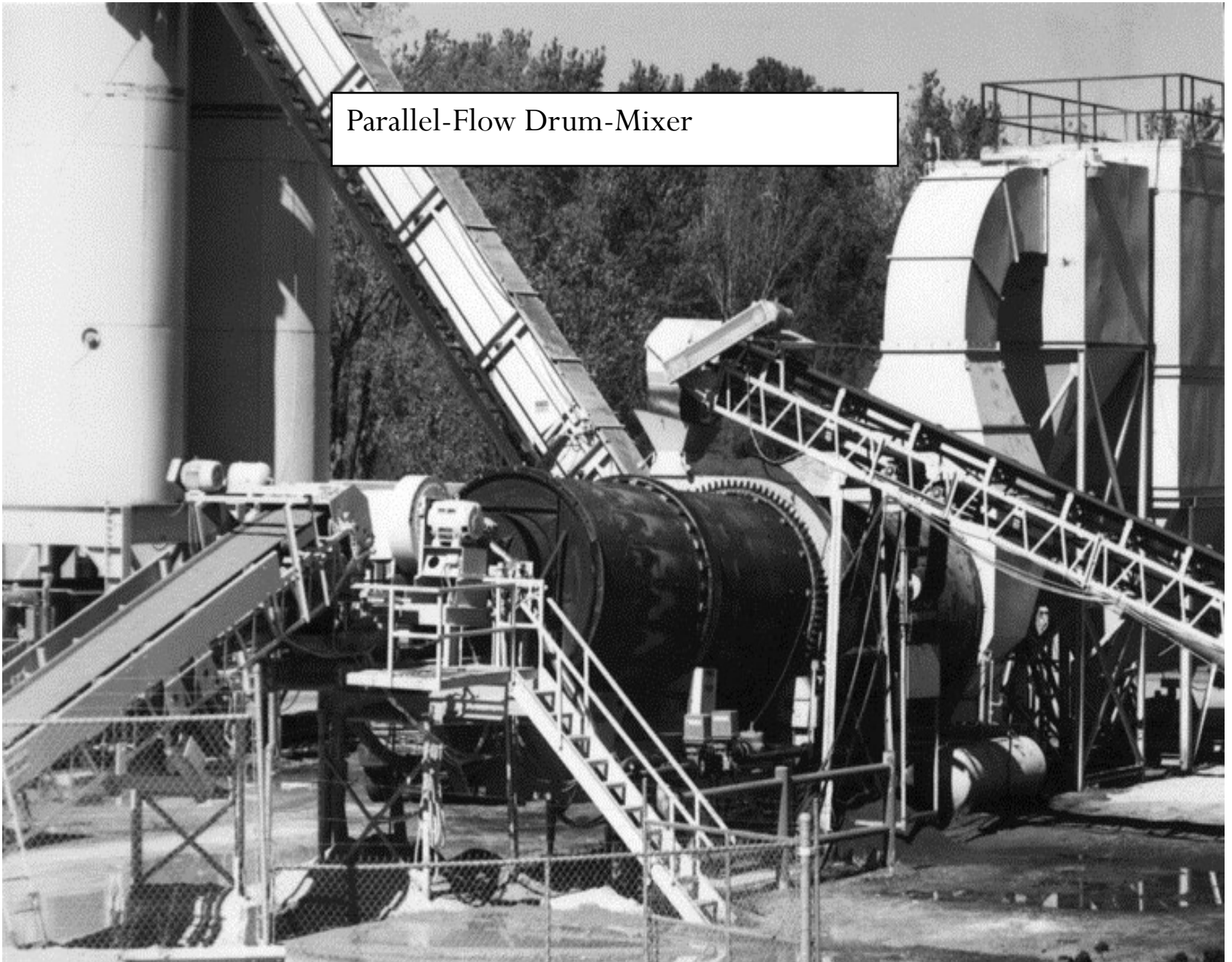


HOT MIX RECYCLING WITH A DRUM MIXER PLANT

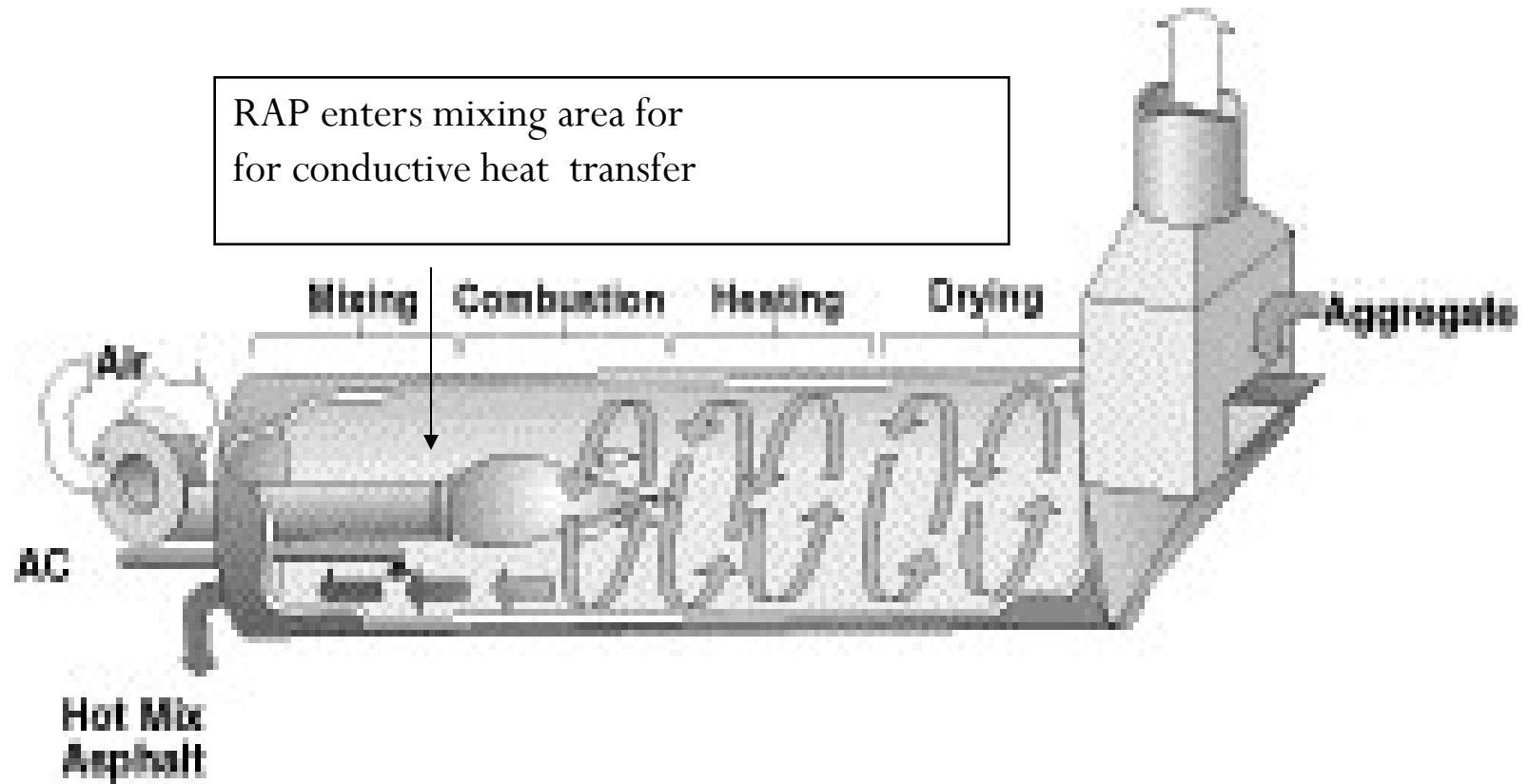
Parallel-Flow Drum-Mixer



Parallel-Flow Drum-Mixer

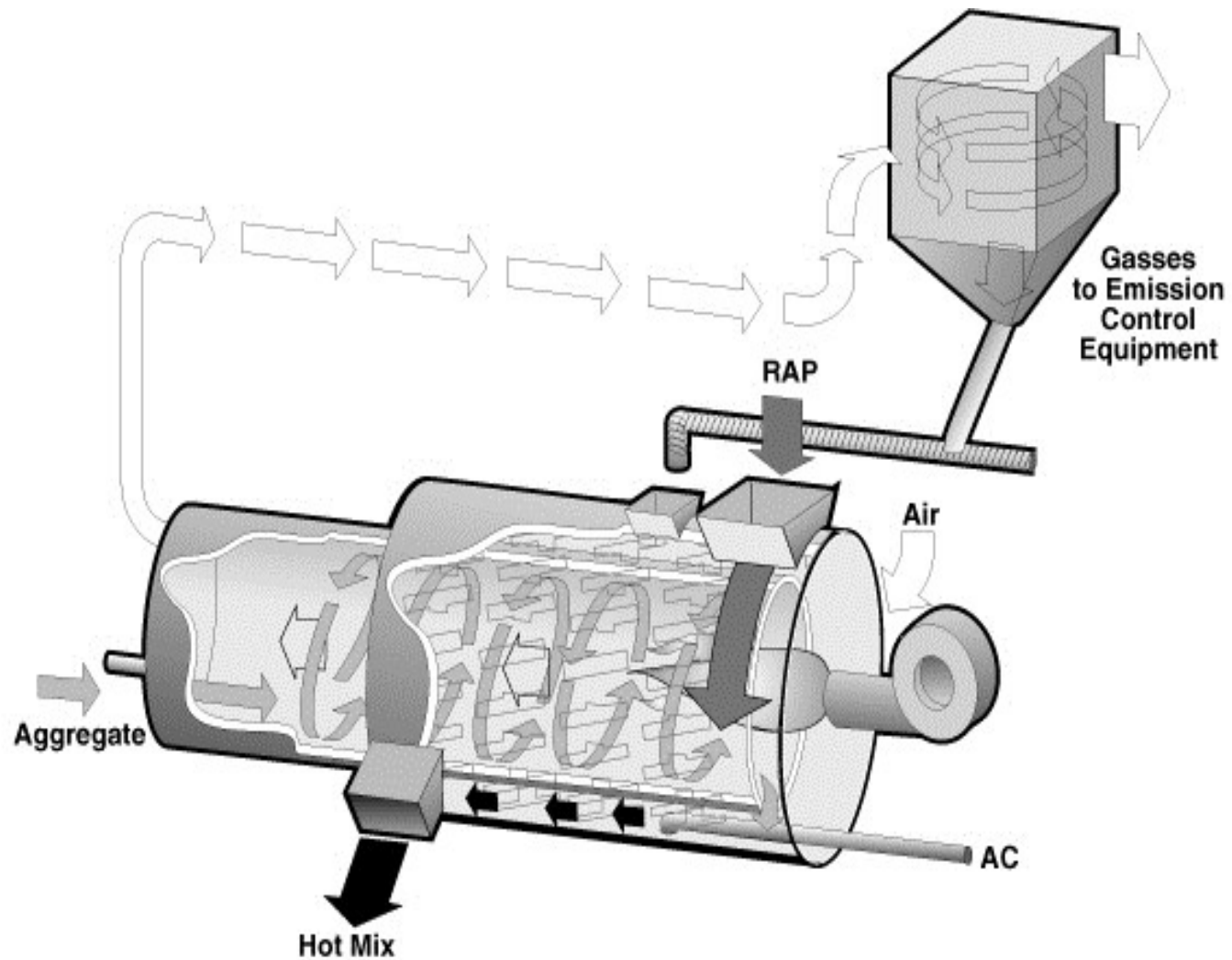


Counter-Flow Drum-Mixer



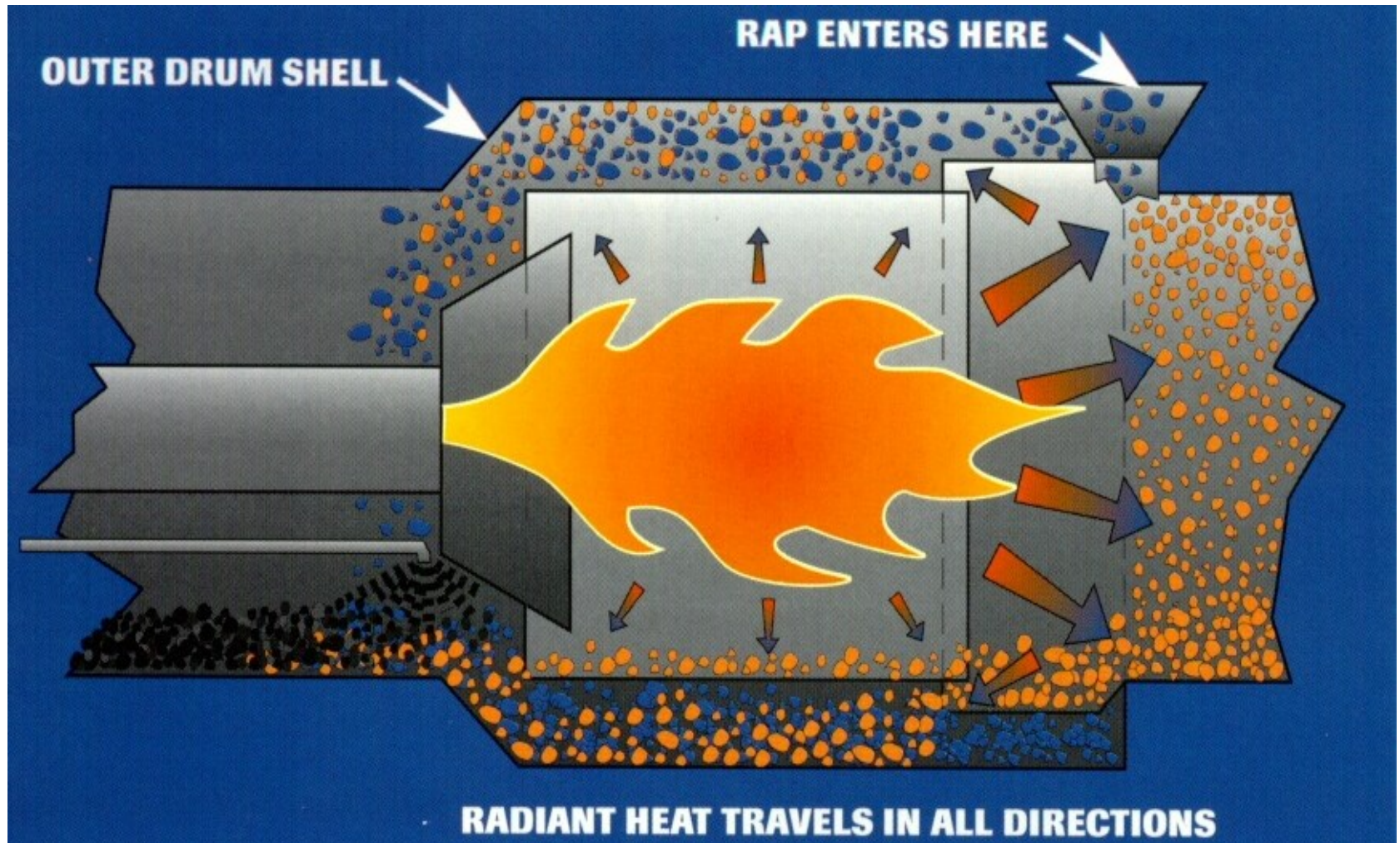
Counter-Flow Drum-Mixer





**UNITIZED COUNTER-FLOW DRYER
CONTINUOUS-MIXER**

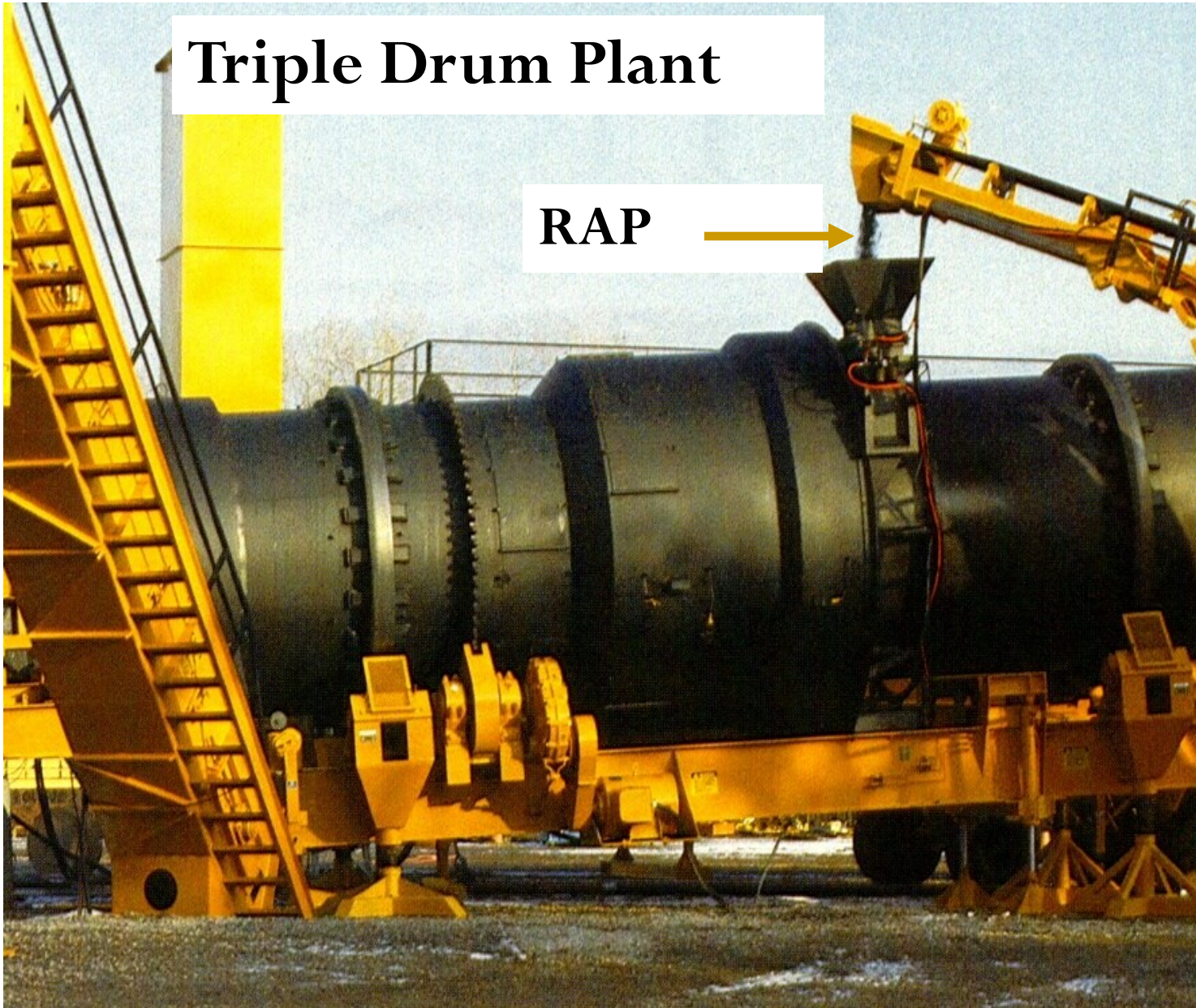
Schematic of a Triple Drum Plant



Red Arrows Indicate Direction of Travel of Radiant Heat

Triple Drum Plant

RAP



Amount of RAP in Drum Plant Recycling

- Factors

 - Moisture Content of RAP

 - Temperature of Superheated Aggregate

 - Temperature of RAP

 - Temperature of Recycled Mix

- Amount of RAP

 - Maximum: About 70 %

 - Practical: About 30 % - 50 %

HOT IN-PLACE RECYCLING

HOT IN PLACE SURFACE RECYCLING



Surface recycling

- On site, Hot In-Place method that rehabilitates deteriorated HMA pavements and thereby minimizes use of new materials
- Depth recycled: 25 - 50 mm (one to two inches)

4 Basic Steps

- Softening pavement with heat
- Scarification or mechanical removal of softened material
- Mixing with recycling agent, new aggregate, new binder, or new mix
- Laydown and paving

A definition

- Recycling agent
 - An aromatic oil – generally a specialty product.
 - A soft asphalt binder (a PG 52, or an AC 5)

Reasons for surface recycling

- Pavement geometry is preserved
- Corrects surface distresses not caused by structural inadequacy
- Can modify existing surface mix
- Can improve surface frictional resistance
- Relatively cheap
- Needs less traffic control

Early Propane Heater and Scarifier

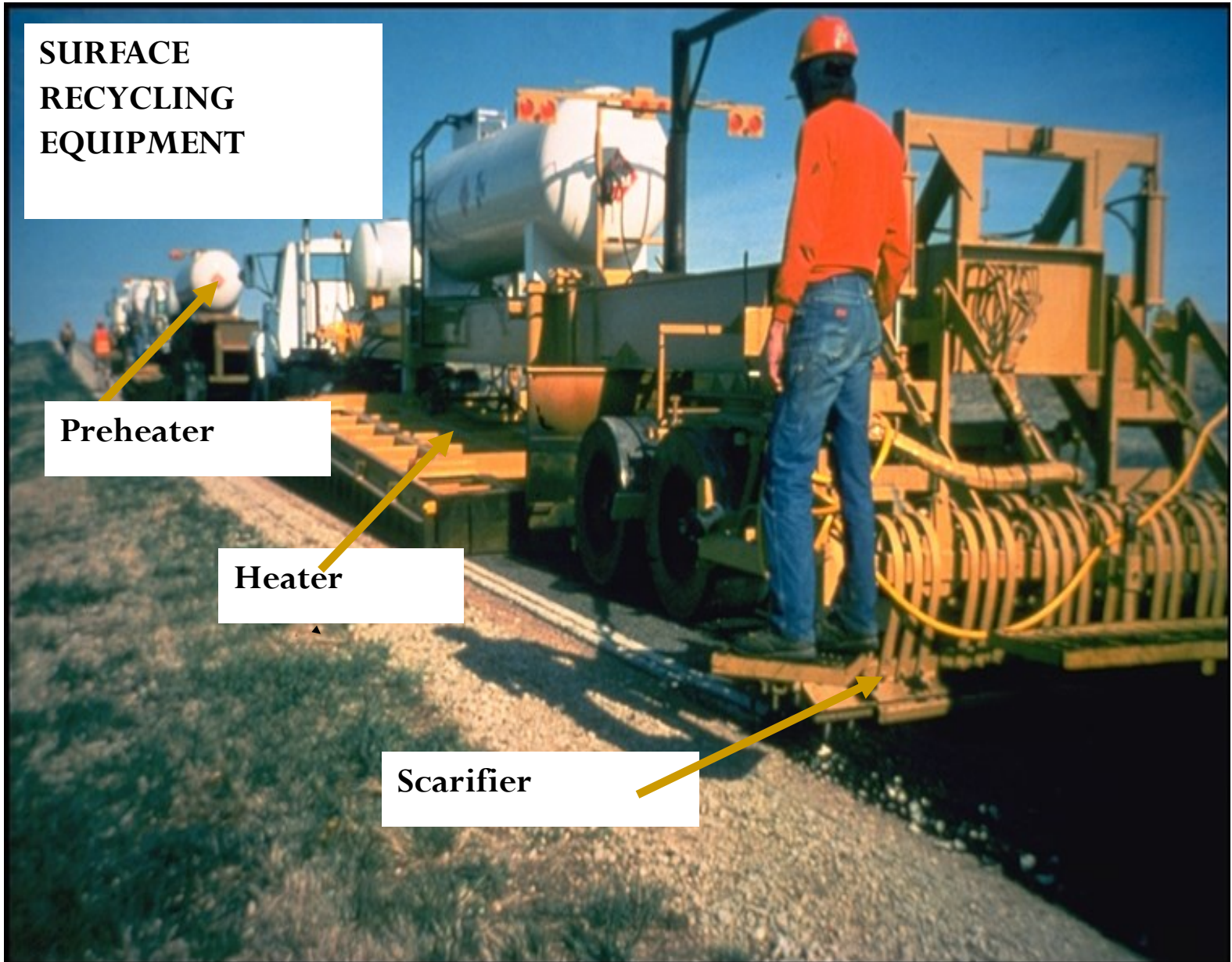


**SURFACE
RECYCLING
EQUIPMENT**

Preheater

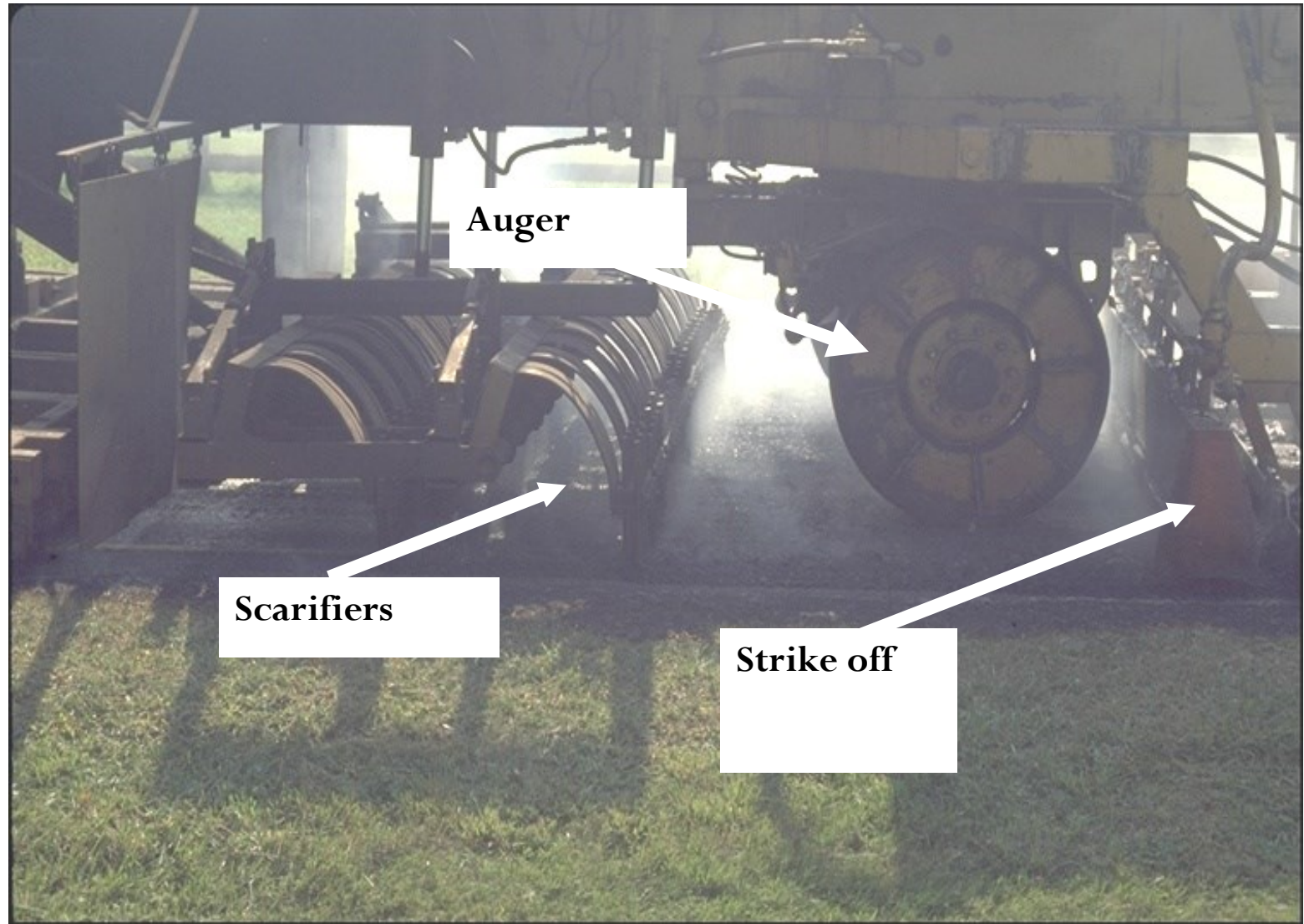
Heater

Scarifier





Recycling Train



Repaving Machine

Heater

New Mix



Remixing

Virgin Material

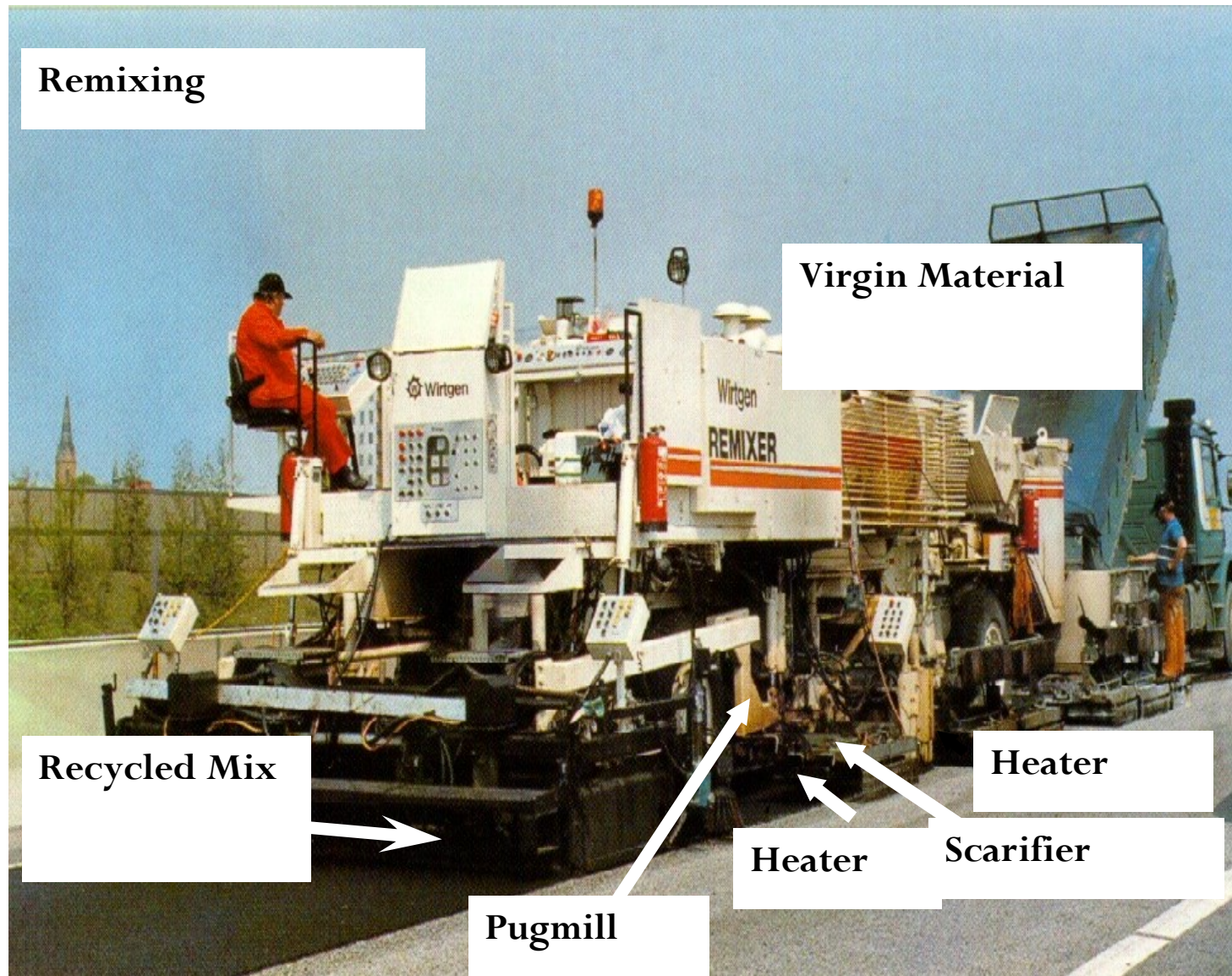
Recycled Mix

Heater

Heater

Scarifier

Pugmill



IN A RESIDENTIAL AREA

