



Municipal Solid Waste Processing

PHASE 14
Once discharged, the autoclave lower door is automatically closed and locked and the process recommenced from stage 3.

PHASE 13
Once the autoclave pressure has been equalised to atmospheric pressure, the lower door is automatically opened and the rotation of the vessel is reversed. This allows the rear face of the lifting blade to act as a screw conveyor to force against the processed municipal solid waste to assist in its discharge through the lower door onto the exit conveyor to the next stage of post treatment separation.

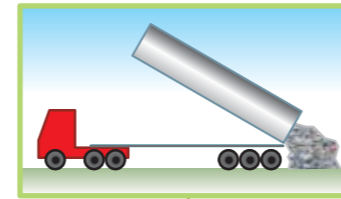
PHASE 12
The autoclave inlet valve is then opened allowing the autoclave to be returned to equilibrium with atmospheric pressure. During this phase whilst the autoclave is under partial negative pressure, the lower door is unlocked ensuring that the door opening cannot occur whilst the autoclave has internal pressure. This is an important safety feature and serves as one of the safety interlocks.

PHASE 11
The steam pipe-work connected to the water cooled condensers is further connected to the vacuum pump system in order that the internal pressure of the autoclave may be reduced below that of atmospheric pressure on completion of the exhaust process for the purposes of removing as much water vapour from the load as is economically sensible at the end of the process cycle.

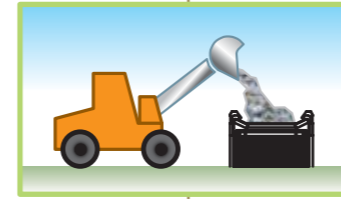
PHASE 10
On completion of the exposure time the vacuum vent valve connected to the rotating coupling on the upper door is opened and the steam from the autoclave is released through water cooled condensers in order to revert it back to water.

PHASE 9
The pressure and temperature within the autoclave are maintained for the duration of the process period at 5.2 bar 160 degrees C.

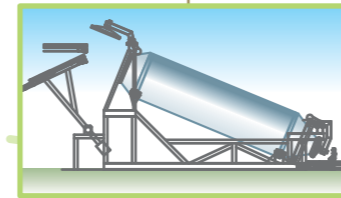
START PHASE 1



PHASE 2



PHASE 14 PHASE 3



PHASE 13

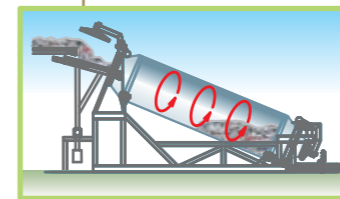


PHASE 4



PROCESSED MUNICIPAL SOLID WASTE AUTOMATICALLY CONVEYED TO THE SEPARATION STAGE
SEE BACK PAGE

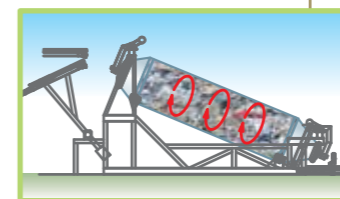
PHASE 5



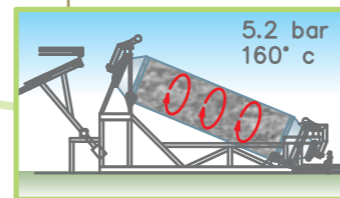
PHASE 6



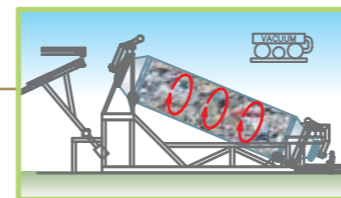
PHASE 7



PHASE 9



PHASE 8



PHASE 1
Waste material is received into the reception hall.

PHASE 2
The waste is transferred from storage area to the autoclave loading conveyor system.

PHASE 3
First available autoclave loading door automatically opens.

PHASE 4
A high speed pivoting conveyor is mounted beneath the high volume loading conveyor which is deployed into the mouth of the autoclave.

PHASE 5
The autoclave which is being loaded is rotated counter clockwise in order to use the rear face of the internal lifting blade to assist in moving the incoming MSW waste stream to the rear of the vessel, further assisted by gravity combined with the force of the high speed in-feed conveyor.

PHASE 6
On completion of loading the autoclave to the 25 tonnes capacity, the pivoting conveyor is automatically retracted and the upper door closed and locked.

PHASE 7
The autoclave is then rotated in the opposite direction in order to lift the MSW inside the vessel towards the top of the chamber whereupon the material falls backwards off of the blade back towards the lower part of the vessel and so on, creating a continuous mixing flow.

PHASE 8
A vacuum is then applied to the autoclave via the rotating coupling mounted in the centre of the upper door to a preset level, at which point the vacuum valve is automatically closed and steam is injected into the vessel through the rotating union in the centre of the lower door until the autoclave reaches an internal pressure of 5.2 bar 160 degrees C.



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