



# INDUSTRIAL FURNACE COMPANY

MHF SERVICES • INDUSTRIAL INCINERATION INC. • INDUSTRIAL SCAFFOLD COMPANY, INC.



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## Multi-Hearth Furnace





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## Dryers

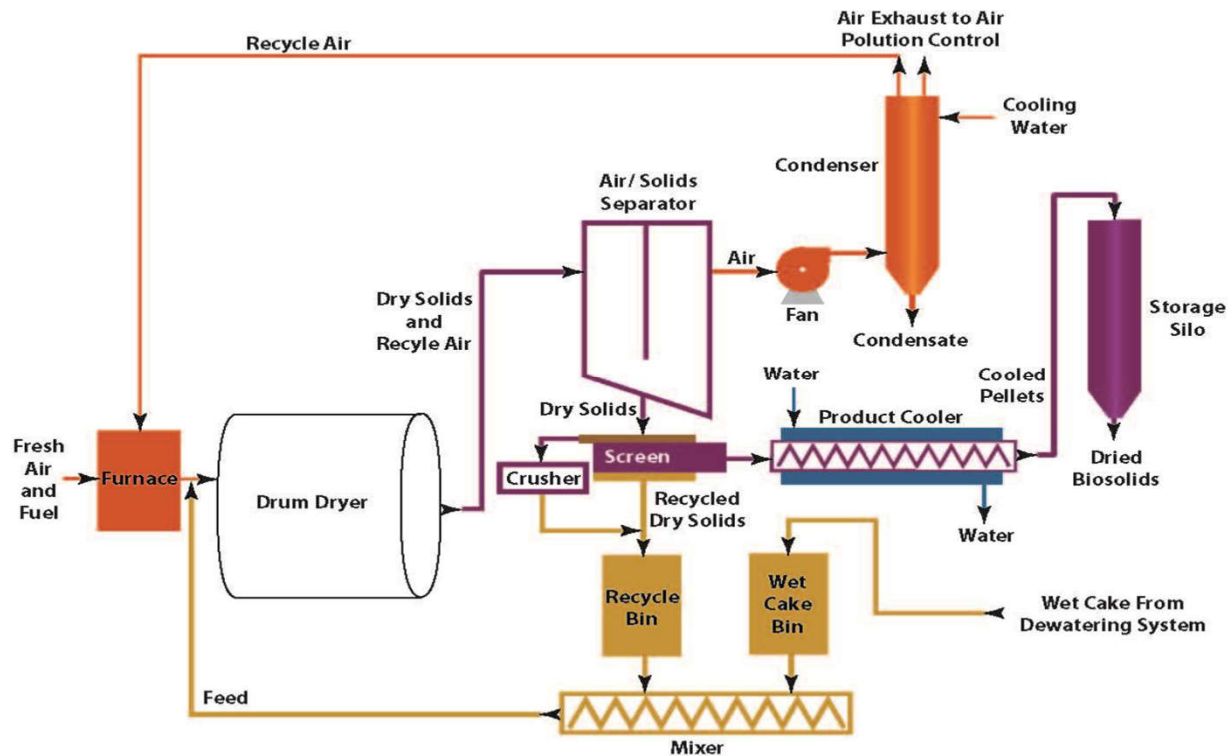
- Newer Technology for Sludge Applications.
- Uses Fuel Natural or Digester Gas (Dirty Gas & High Maint)
- Needs Sludge Feed System (Pumps)
- Requires Regenerative Thermal Oxidizer or other EPC Equipment to Clean Stack Emissions.
- Storage or Haul Class “A” Sludge (Sell?)



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## Rotary Dryers



2014 Water Environment Federation





## Dryers

- Newer Technology for Sludge Applications.
- Uses Fuel Natural or Digester Gas (Dirty Gas & High Maint)
- Net Energy Consumer \$\$
- Needs Sludge Feed System (Pumps)
- Requires Regenerative Thermal Oxidizer or other Air Pollution Control Equipment to Clean Stack Emissions.
- Storage or Hauling of Class "A" Sludge (Sell?)



## Dryers Concerns

- Safety of Dry Dust and Overheating of Stored Dried Sludge
- Complexity requires Qualified Operating Staff
- Air Emissions (Permitting and APC Equipment)
- Capital and O&M are High \$\$\$
- Fire Potential in Product Storage (Auto Oxidation)
- Requires knowledgeable Engineering to reduce risks



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## BTP (MHF) versa Dryer

- BTP uses Sludge as its Main Fuel
- Reduced Hauling BTP (Ash) 200:1 versa Dryer Sludge (60:1)
- Operations familiar with current BTP
- Upgrade Costs \$4-6 mil versa 10s mil for new Dryer System
- City's current Furnaces are \*State of the Art\* Bio Thermal Processors already!
- City's BTPs are EPA Compliant. (Set the Standard in 2002)
- BTP Clean Stack no new Permits



## WWTP Future

- Upgrade Sludge Handling from Dewatering to Removal.
- Plans for Biosolids Thermal Processors?
- Planning and Talking about Dryers were is this?
- Dryers Output Class "A" Sludge (Dispose or Sell?)
- BTP no Fuel if Dewatering Equipment (< 28%Solids)





Closing Comments

THANK YOU

Questions