## **AUMUND Corporation**

# AUMUND

**Solutions for Alternative Fuels** 

**IEEE East 2022 East Coast Conference** 

#### **AUMUND Alternative Fuel Solutions – IEEE East Coast Conference 2022**

- 1. AUMUND Alternate Fuels Philosophy
- 2. Materials Matter
- 3. Defining Material and System Goals
- 4. Industrial Waste, MSW, C&D, TDF, RDF
- 5. The Design Approach
- 6. Modularization of The System



#### **Alternative Fuel Solutions and Philosophy**

#### **Market Driven Materials Demand**

- Systems require higher fuel replacement levels
- Fuel handling volumes increase when supplementation rate rises
- The material flexibility and therefore system flexibility demands are now much higher

#### **User Demand**

- The same reliability standards are present for Alternate Fuels as for process
- Solutions are no longer driven by acquisition cost, but by availability and reliability

#### **Solution Driven**

- The systems have to be flexible
- We use a modular approach to define according to material demand, layout and customer drivers











































Treatment & Handling

NOT ALL MATERIALS ARE CREATED EQUAL OR CLEAN AND DEFINED



#### **Alternative Fuels Waste Types – Industrial Waste**



- Uneven material shreds
- Cloth waste or shredded fiber wastes
- Contaminated water, oils, grease and other chemical
- Foreign debris mixed in
- Variable characters and qualities
- Can include biohazard and medical wastes



#### **Alternative Fuels Waste Types – Municipal Solid Waste**



- Wastes from households and commercial garbage collections
- Highly variable and uneven
- Volumes of plastic, fiber and other wastes
- Large volumes of organic matter
- Contaminated by water, oils, grease and other chemical
- Foreign debris mixed in
- Variable characters and qualities



#### **Alternative Fuels Waste Types – Construction and Demolition Waste**



- Radically different home, commercial and industrial wood scrap and wallboards wastes
- Contaminated water, soil oils, grease and other chemical
- Foreign debris mixed
- Can contain large rock, stone, concrete and metal
- Variable characters and qualities



#### **Alternative Fuels Waste Types – Tire and Tire Derived Fuel**



- Can be variable in size, quality and screened sizing
- Can contain metal bead
- Can be contaminated oils, grease and other chemical
- Foreign debris can be Variable characters and qualities



#### Alternative Fuels Waste Types – Tire and Tire Derived Fuel



Final TDF



#### **Option:**

- Magnet separation
- Analyzer
- Automatic sampling station



Treatment & Handling



#### Alternative Fuels Waste Types – RDF TREATMENT Steps (without organic)



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#### Alternative Fuels Waste Types – RDF TREATMENT Steps (with organic)



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#### **RDF treatment steps for MSW**

#### Alternative Fuels Waste Types – RDF TREATMENT Steps for MSW



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THERE IS NO ONE SIZE FITS ALL SYSTEM OR APPLES TO APPLES COMPARISONS



#### **Alternative Fuels Modularized Material Handling Flow**



### Thank you for your attention!





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