Republic Machine INC.  
Improving Our Environment

George Sotsky, Founder  
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History / Background of Size Reduction

• **Dual Shafts Shredder**
  – Tendency to wrap when cutting fiber
  – Have their place (metal, etc…)

• **Single Shaft Shredder** *(Low-speed High-torque)*
  – Developed for wood processing
  – Expanded into size reduction industry
  – Fantastic for brittle & solid products
  – Standard cutting system *(hawksbill)* problematic with film and fibers *(i.e. wrapping)*
Republic Solution

- Zoidal cutting system
  (patent pending)
  - Developed by Republic Machine in response to wrapping issues
  - Improved rotor end seal system
  - Works well with film and carpet

Zoidal XL – Zoidal – Hawksbill
Development with C.A.R.E.

• First machine performed well in tests
  – Some heat issues
  – Premature cutter wear
  – Led to development of new machine

• Second machine
  – More aggressive cutting system
  – Water cooled rotor & anvil
  – More maintenance friendly design
    • Split-A-Part design (patent pending)
Split-A-Part Machine

Republic Machine answer for the second carpet test machine

Less than 5 minutes to open or close the machine
Split-A-Part Features / Benefits

- Easier maintenance to maintain cutting efficiency
  - Moveable anvil & keyed counter knives
- More aggressive cutting system for productivity
  - Zoidal XL cutting system
- Water cooling for tight cutter gaps
- Provide access to crucial service and maintenance items

Less than 90 minutes total cleanout time
Republic Machine Further Innovation

- Direct drive system
- Over-Torque limiting clutch
- Beltless drive system
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