

IPRO 321 – Abstract

April 27, 2007 Product Design

and Performance Evaluation for Consumer Products

Sponsor: The Manhattan Group

President: Mr. Seth Lewis



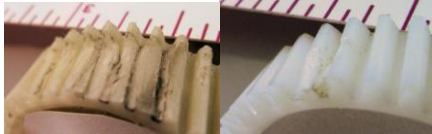
Paper Shredder Teams

Gears

Michael Tomsa

Dmitriy Zverev

Goal: Evaluate the gears and minimize the gear failure at initial shredding cycle.



Solution

Plastic Gears

Lengthen Motor Worm/widen helical gear

Upgrade the material to glass-filled nylon

Metal Gears

Change shape of center hole on metal gear

Heat treat the gear to increase hardness

Sound

Richard King

Donald Myers

Gregory Mennenga

Jianyu Chen

Goal: To reduce the general noise output with a target of 10db reduction.

Design

Julianna Kovacs

Chi-Woong Kwon

Goal: To evaluate the current marketing offerings and price points and create new designs for a line of paper shredders.

New Design:



Safety

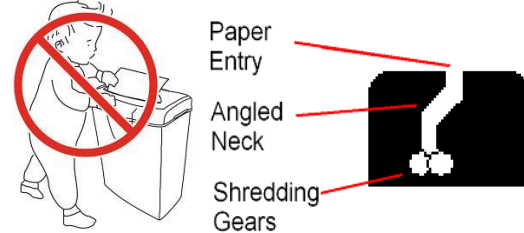
Raisa Pelae

Garrett Strassler

Goal: Evaluate the different models and advise improvements to enhance the safety features to exceed the 2007 UL Standards.

Solution:

Capacitance Touch-Sensor, Angled Entry



Sound Solution:

Heat Insulation

Styrofoam

Household Insulation



Household insulation

