

# Training and Kaizen Primer

# LSS Introduction

- The Conlon Group LLC conducted a one day instructional and training seminar for all employees of the Ribbon Blender operation
- Provided an introduction to Lean Manufacturing concepts as well as lead the process of applying these concepts to the Ribbon Blending operation
- The group began with a "Waste Walk, Spaghetti Diagram, and Value Stream Map" to facilitate the first step in the Lean Pathway which is to "See the Waste."

# House Of Lean Tools

- Theory of constraints and SMED were reviewed with the group
- The group determined the blender process was the constraint that needed to be minimized. See Action Items
- Defined, minimized and moved as many internal elements as possible
- A waste of material of \$60,000 was identified

Process Step	Description	Wastes	Lean Solutions	Timeline
1. Unload Blender	Unloading the blender was estimated to take 45min (machine time = 27s/bag)	Inventory/Motion - not enough skids in area so operator had to go and get skids	5S, Kanban	7/14/13
		Motion - Operator could not find tape gun	5S – Shadow Board	7/14/13
		Correction -adjusting bag weights during packout	Best Practices	6/12/13
		Correction -Downtime due to removing paper blockages in packing line	Best Practices	6/12/13
		Correction - Bag packer leaking 50lbs product on floor every blend	Maintenance (TPM)	ASAP
2. Process Time	The time that a blend is mixing in the blender = 75min or 120min	Lost Creativity/Human Mind -blends are running for excessive amounts of time in between shifts	Scheduling	TBD
		Overprocessing – blends may be running in mixer longer than necessary	Mix standard	TBD
		Inventory – operators ran out of Zeolite so could not make blend	Kanban	TBD
3. Load Blender	The loading of raw materials into the blender = 30min	Not significant amount of waste in this step. Revisit when Process Steps #1 and #2 have been addressed. The Conlon Group LLC www.theconlongroup.com	Load partial raw materials during internal #2 Process Time	

# External Elements

- Take out trash
- Sweep up working area
- Collect raw materials for subsequent blend(s)
- Stretch wrap finished product
- Weight out partials for subsequent blend
- Prepare pallets, sleeves, slip sheets for packout
- Prepare packaging for packout (labels, stamper, review order)
- Eat, drink, rest
- Load Super Sacks

# Potential with all improvements

# of operating days per week	# of shifts per day (1 man)	# of shifts per year (50 weeks)	Production per Shift (lbs)	Potential Annual Production Totals (lbs)
7	2	700	9,000	6,300,000
6	2	600	9,000	5,400,000
5	2	500	9,000	4,500,000
7	2	700	12,000	8,400,000
6	2	600	12,000	7,200,000
5	2	500	12,000	6,000,000
4	2	400	12,000	4,800,000

# Results

- The current operation was running 7 days a week on two 10 hour shifts producing 5500 pounds per shift
- The new process will allow the team to produce 9000 pounds in an 8 hour shift
- The final result is a 5 day per week 2 - 8 hour shift operation - \$125,000 annual savings