A Wake Up Call: The Importance of Management Commitment (A Case Study from a Wire & Cable Manufacturer)

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Kalas Manufacturing, Inc. is a small to medium sized wire and cable manufacturer located in Denver, Pennsylvania. The privately owned company was founded 40 years ago and has three plants in the Denver area. Plant #1 manufacturers fabricated copper from copper rod. Primary manufacturing processes include rod breakdown, intermediate and fine wire drawing, bunching and rope stranding of copper. Plant #2 manufactures the extruded finished wire and cable product. Kalas has PVC extruders, as well as, cross-linked polyethylene and neoprene extruders. Primary manufacturing processes include insulating, twisting of inner conductors for multi-conductor products and jacketing. Plant #3 manufactures terminated cable assemblies such as battery cables, ground straps and jump starts. The primary manufacturing processes at plant #3 are cable cutting, terminal application, solder dipping, lead molding and PVC injection molding.

This paper describes how a small wire and cable company has taken a proactive approach to reducing and eliminating waste in all areas of the company. More importantly, how a small manufacturing firm can transform from a “compliance” mentality to a corporate strategy of “zero discharge”.

Compliance Mentality

Some time ago, Kalas Manufacturing, Inc. was like most small to mid-sized manufacturers when it came to environmental issues. That was to regard environmental issues with a set of “compliance lenses”. When an environmental issue was addressed, the response would be, “What do we have to do?” The underlying connotation of that question was, “What is the minimum required to comply?” It wasn’t a malicious intent, we simply viewed environmental issues as a high non-value added cost. Also, like most companies, we wanted to be an environmentally responsible neighbor in our community but viewed environmental issues as not central to our daily business.

Connecting Waste Reduction to Profit

One of our first efforts in reducing waste was the introduction of a “returned reel and drum” policy. We selected about six customers from our base of over 600 customers and suggested that we start a returned reel and drum policy. The reels and drums which are made of plywood and fiber must be reusable, i.e., the customers were not to return damaged reels and drums. The customers were very receptive to the idea because it reduced their price, as well as the cost of disposal of the reels and drums. So, in 1989, we began the program. The program now has more customers and we are currently reusing over 7,000 reels, 1,100 pallets and 360 drums each year for an annual savings of over $200,000 per year, as well as, 206,000 lbs. reduction in waste. The success of this program laid the groundwork for the adoption of our waste elimination strategic goal years later.

Many other smaller reductions in waste were going on in the early 1990’s. These were driven from the point of cost reduction and yielded the side benefit of reducing waste. We still had not crossed the bridge from “compliance mindset” on environmental issues to a “strategic mindset” viewing it as a long-term element of our company’s success in growth and market leadership.
Creating a Strategic Environmental Vision

In 1996, Kalas took several significant steps in going from a random series of waste reduction actions to the adoption of a strategic goal of “zero discharge”. A full-time environmental, health and safety coordinator was hired. Kalas contracted an outside agency to perform a combined compliance and pollution prevention opportunity assessment. That same year we identified that “zero discharge” would be added to our strategic goals. The success of the waste reduction projects such as the returned reel program had already shown the benefits of adding this strategy. Also, by adopting “zero discharge” we took our desire to be a good corporate neighbor and mainstreamed into part of our day-to-day objectives in running the company.

Proactive Approach

With the adoption of a new strategy came a new approach to environmental issues. Kalas took a proactive approach in going beyond compliance. Initially, our focus was to address the issues identified in the compliance and pollution prevention assessment. We began a series of projects with the “zero discharge” goal in mind.

1. Returned Reels/Drums – The Next Step: We shifted our focus from reducing reel/drum waste to eliminating it with returnable packaging. For the types of products that we make, there is currently no commercially marketed returnable reels and drums due to the weight and method of payoff that our customers need. Our President, Richard Witwer, spearheaded the research and development of a collapsible plastic reel that can be reused indefinitely. Tooling has been developed and working in conjunction with a key injection molding supplier, prototypes have been built. We hope to have the working reels in production by early 1999. The potential additional savings over the current program is in the hundreds of thousands of dollars as well as pounds of waste eliminated. This is such a unique product that we are also looking into the potential of marketing it to other companies.

2. Compound Silos: We looked at ways to eliminate the use of gaylords to hold the PVC and other compounds that we use. Gaylords are the mainstay of the compound business for packaging, storing and delivering compound pellets. However, they take up tremendous amounts of warehouse and manufacturing floor space, add cost to the compound, and add a lot to our waste stream. In 1997 we began the installation of compound silos for our three primary compounds. The silos are now complete and in initial operation. The compound is fed into the silos directly from our compound supplier. From there, the compound is piped directly to the extruder, thus eliminating the need for gaylord boxes to store and transport compound. The results are tremendous. Kalas consumes 7.4 million pounds of the three compounds each year which requires 5,920 gaylord boxes. Therefore, the silos represent a reduction in waste of over 45,207 lbs. of cardboard a year. In addition, each box has a plastic liner which is disposed of after each use. These will also be eliminated.

3. Developing Returnable Packaging With Suppliers – Kalas has begun a concerted effort to eliminate waste and dunnage from supplier packaging. We have worked with three of our top compound suppliers to supply their products in returnable packaging. We are currently working with a color concentrate supplier to develop a complete delivery system that includes returnable packaging. This would be the first system of its kind in the suppliers market.

4. Source Elimination: Kalas purchased a state-of-the-art dual head extruder based upon the savings in changeover time and waste elimination. This extruder allows for the switching from one color of wire to another color of wire without shutting off the machine and bleeding out the old color and starting the machine, bleeding out the new color start-up. This has eliminated the bleed-out which is approximately 100 lbs. per change over.
Employee Involvement

After communicating the strategic goal of “zero discharge” to our employees, employees responded with ways to achieve the goal. Through the use of our employee involvement programs, Together Everyone Accomplishes More (TEAM) in Kalas plant #1, Concepts Unlimited in Kalas plant #2, Total Employee Involvement (TEI) in Kalas plant #3 and QUEST in our office and administrative areas, employees were able to make their ideas of waste reduction/elimination a reality. Some implemented ideas to date have been:

- Use used empty plastic drums for removal of lead dross, instead of new thereby reducing the number of drums that go into the waste stream.
- In-house solder reclamation and reuse of flux water through a simple straining process yielded a savings of over 1,200 lbs. of solder each month.
- Reuse of PVC bleed-out at the injection molders yielded over $1,130 in savings and eliminated PVC bleed-out from going into the waste stream.
- Reprocess neoprene bleed-out directly into the extruder. Due to the nature of neoprene, this had never been thought of or attempted previously. The employee worked with our supplier to develop the process. While it’s in it’s early stages, the process is anticipated to save Kalas over $112,000 per year, eliminate the neoprene bleed-out waste and save an additional $8,000 in waste removal costs.
- Paper in-house re-use program submitted by the office/administration.

While many of the ideas implemented as a result of the employee involvement programs are small in impact, the key issue is that the employees are contributing to the overall achievement of our goal.

Long-Term Plans

While it’s arguable that “zero discharge” is not attainable, we chose the goal because it represents a stretch target. We also recognize that we are in our infancy in working towards the goal. Future plans to help us achieve our “zero discharge” target are:

- Environmental Management System – Being a company that has achieved ISO-9002 and most recently, QS-9000, we are very much aware of the role of a documented management system to ensure a systematic and long lasting approach to achieving any company target. Whether this translates to adopting ISO-14000 or another environmental management system, one of the next steps for Kalas is to develop a systematic management approach to environmental issues.

Conclusion

Kalas Manufacturing, Inc. has made the transition from a compliance mindset towards environmental issues to adopting a strategic goal of “zero discharge”. The integration of this environmental goal into our business operations has significantly helped Kalas toward achieving it’s profit, growth and market leadership goals. Early successes in waste reduction projects led to this transition. Kalas’ experience shows how a small to medium manufacturing company can successfully adopt an environmental strategy into it’s operations.