

Case Study- Component Surge Arrestor Project

Client Profile:

The ABC Company is a contract manufacturer of electrical wire harnesses, cable assemblies, electrical enclosures and major sub-assemblies for client companies in the telecommunications, battery / power supply / energy, bio-tech / medical, automotive, heavy equipment, and other various industrial and commercial industries. ABC partners with original equipment manufacturers and open market companies seeking competitive outsourced product design and manufacturing solutions to improve quality, reduce cost, shorten production time and deliver on a just-in-time basis. ABC has 2 manufacturing locations in the Midwestern United States.

Client Situation in 2003-2004

The ABC Company was in a tremendous growth spurt due to acquiring more and more projects from its' largest client, General Electric. During this time, it became more and more apparent to senior management that changes needed to made and different business models must be explored. Red Streak Corporation began discussions with ABC on ways to cut procurement and component prices through re-sourcing the individual components through Red Streak's vast global supply chain.

Market and Industry Conditions in 2003-2004

During this time the world economy saw unprecedented times of high input costs on all most every facet of the manufacturing and distribution model. Many factors drove the higher costs, mainly demand of oil and raw materials from China, steel import tariffs and worldwide concern of terrorism drove the pricing. Below are cited examples of market conditions.

- Price of Raw Steel both Import and Domestic rose almost 100% between 3rd Qtr 2003 and 2004.
- Price of Non-Ferrous Metals increased 40-55% between 3rd Qtr 2003 and 2004, in some cases 80%.
- Prices of Nickel used in Nickel Plating has increased 46% year over
- Fuel Surcharges from common LTL carriers have increased from 2.3% in 3rd Qtr 2003 to over 14.1% currently; full truckloads are averaging 18-19%.
- Freight minimums and rates have overall increased a minimum of 6%, exclusive of the fuel surcharges, causing LTL freight to increase over 20%
- The price of diesel fuel has increased over \$0.70/gallon since January of 2003.
- Global Energy prices have risen to an all time high causing much higher factory operating costs and input prices.
- Plastics costs have increased 20% due to petroleum cost spiking.

From Concept to Implementation.....

From the beginning of meetings with ABC, both companies explored very out of the box and large scale material integrations or re-sourcing projects. Red Streak from the beginning of the process positioned itself to be able to handle the complete package from reverse engineering, tooling, production and distribution of all raw material components that ranged from injected molded plastic to formed silicon bronze. The concept was to eliminate the consistent juggling of issues of managing 10 different vendors, outages, logistic problems and overall coordination to meet manufacturing deadlines and turn the process over to Red Streak as the single source for the complete component grouping. Further investigation and interviews with line workers at ABC uncovered several quality issues with the current components which Red Streak took under advisement in the development of the new tools for the components. Throughout the investigatory period Red Streak remained keenly aware of the trust level that must be achieved with ABC for this project to be a success.

The implementation process was phased in to continue to facilitate the increasing trust level. Red Streak representatives presented the initial quotation to members of ABC and senior management of ABC felt that the cost reduction and process change warranted serious consideration and requested that Red Streak provide 1st article samples of each of the components. Red Streak, utilizing its' global distribution network methodically selected manufacturing partners to produce the tools and samples for this project. Red Streak also took the information regarding quality and design flaws and created tools to repair or improve the parts with the new tooling. A Red Streak representative oversaw the initial 1st article sample production at each of the facilities involved and personally approved the quality of the samples. Within 45 days of the sample production request, senior management and engineers at ABC along with members of the Red Streak team evaluated and approved each 1st article sample as produced. 1st article samples came complete with material certifications, dimensional analysis and where applicable plating certificates.

Upon approval of the samples, Red Streak was contracted to begin the manufacturing of the components. At that time, Red Streak began internally developing a logistics plan to keep a continual flow of materials to ABC and maintain the pricing agreed to in the contract. Warehousing was developed in Los Angeles to handle certain items that were being produced offshore. Meanwhile, Red Streak secured warehousing space across the street from ABC's manufacturing facility. Racks were erected to store product to support a Kanban or JIT environment. Exacting tubs were purchased to match current bins being used by ABC to ensure a seamless transitional period. Approx 45 days from the request to manufacture, Red Streak had inventory of each of the parts in both the Los Angeles warehouse and the warehouse across the street.

Red Streak utilizes technology to provide real time inventory data to the client. Purchasing agents have unique logins to the Red Streak system that allows them to check stock in all warehouses, place orders and place future back orders. This allowed the purchasing agent at ABC to use one purchase order number for all purchases throughout

the month. Moreover, it gave the agent the ability to request additional materials from other warehouses to meet manufacturing demand.

What were the results?

The results met and exceeded expectations, since inception; there has not been a stock out situation that resulted in a line shut down. Quality of parts manufactured has been superior to that prior to Red Streak's changeover. Systemically, it has dramatically reduced the workload across ABC's functional areas, reduced purchase order entry, sourcing issues and warehousing/carrying costs. Financial results on hard unit costs for the 1st six months of the project during a tremendously inflationary market are as follows:

ABC Spend based on '02-'03 Costs provided, with freight inclusive: **\$179,047.71**

ABC Spend based on current Red Streak Costs: **\$152,016.43**

ABC Savings for 6 Months: **\$27,031.28 or 18%**