**INTRODUCTION**

This case illustrates the importance of environmental awareness, the long-term prospect of product development, and the resourceful use of an acquisition strategy to achieve organizational objectives. It opens with an overview and history on the Fisk brothers and Fisk Alloy Wire, Inc. The case then provides an in-depth explanation of the wire production process and the difference between pure copper, copper alloy, and high performance alloy materials. The development of Percon, the changing needs in major commercial wire segments, the use of an acquisition strategy to satisfy production requirements, and the introduction of new market opportunities are all featured in the case, leading into a discussion of decisions facing the Fisks as the company moves forward.

This case study is structured to emphasize the tools and value of external environment analysis. It also effectively demonstrates strategic uses of acquisitions and the successful employment of strategic entrepreneurship. The following steps can be used to define Fisk Alloy Wire, Inc.’s industry status and then to evaluate the strategic challenges of a company poised to take advantage of emerging environmental conditions and market opportunities.

* Build a profile of the copper wire industry, and pinpoint Fisk Alloy Wire, Inc.’s distinct position within the industry. What tools did the company use to shape its strategic perspective?
* Describe the company’s acquisition of Strandflex and how it fits into Fisk Alloy Wire, Inc.’s overall strategic plans.
* Given Fisk Alloy Wire, Inc.’s current market position, outline the market opportunities available to the company, and explore their strategic potential.
* Identify the leading strategic priorities that are supported by the analysis. Explain your recommendations, and conclude with a statement of the key strategic issues facing the company.

**ANALYSIS**

* ***Build a profile of the copper wire industry, and pinpoint Fisk Alloy Wire, Inc.’s distinct position within the industry. What tools did the company use to shape its strategic perspective?***

The metals industry distinguishes between commodity ore producers and specialty alloy manufacturers. In the copper and brass industry, high volume copper strip and wire is recognized for its conductivity qualities. 87.5% of this $4 billion market (in 2005 values) is copper wire, which bears the mechanical loads that carry electronic, telecommunication, and data signals. Easily processed and readily available, commercial copper competes on price and offers limited functionality. Many large competitors, including raw material producers, compete in this commodity space. Within this broad umbrella, a small sliver (perhaps 1%) is specialized copper alloy, which incorporates other elements to enhance the performance of the metal in different ways. The majority of tonnage in the commercial copper alloy market is strip product. With its expanded alloy development capability and integrated manufacturing operations, Fisk Alloy Wire, Inc. inhabits the remnant wire portion of the copper alloy segment. The very narrow market position within the metals and copper industries maintained by the company is even further focused in the tailored high performance copper alloy market – which is driven by emerging demands in electronics, but represents only a small portion of total demand for commercial copper. Here, at the top end of the conductor trade, copper wire is used for circuits, connectors, and terminations and in the operation of electrical components. Fisk Alloy Wire, Inc. has a core competency in developing and producing high performance wire and cable applications that require advanced metal performance in terms of strength, integrity, conductivity, flex-life, surface electroplating, fabrication, and price-to-performance valuation.

Observing and interpreting forces in the external environment that have a potential to impact one’s business can be challenging. However, the greater the understanding of a firm’s general, industry, and competitor environments, the more likely the firm can position itself for success. Fisk Alloy Wire, Inc. has demonstrated how the tools of external environment analysis can successfully poise an organization to take advantage of emerging opportunities. In particular, Fisk’s targeted awareness of long-term trends in the general environment, where data can be incomplete and ambiguous and predictions can be wildly inaccurate, is precisely the source of its seemingly prescient ten-year investment in a cadmium-free high performance copper alloy, Percon 24. Scanning a cross-section of the political/legal, sociocultural, technological, global, and physical environment segments of the general environment, Fisk Alloy Wire, Inc. was able to identify early signals that called for eliminating hazardous chemicals and increasing the eco-efficiency of input materials. The company is at the leading edge of paradigm shifting forces in the external market due to its ability to detect the meaning, develop projections, and determine the timing and importance of environmental changes. Furthermore, its assessment of industry and competitor threats has provided Fisk Alloy Wire, Inc. with a strong understanding of the external factors that can be a powerful guide in making the strategic choices necessary to support its growth and excellence objectives.

* ***Describe the company’s acquisition of Strandflex and how it fits into Fisk Alloy Wire, Inc.’s overall strategic plans.***

Fisk Alloy Wire, Inc.’s motive for acquiring Strandflex was unique and situationally specific. Rather than acquiring the older steel wire stranding mill for common purposes of increasing market power or accessing new capabilities, the company was singularly interested in adding capacity to process its own newly-developed specialty product. Faced with lengthy and unfeasible options for new equipment to process Percon 24, the Fisk brothers devised a clever plan to recondition, reconfigure, and increase the speeds of the old mill’s tubular stranders. Moreover, selling unusable equipment to overseas outfits defrayed 40% of the purchase price of Strandflex. Consequently, this approach could be subsequently applied, as it was to integrate 50 ultrafine tubular stranders purchased from Houston’s Medallion Wire and Cable in 2008. However, it did not provide Fisk Alloy Wire, Inc. with a platform or competency in acquisitions that can shape its strategy or fuel growth. While highly beneficial to the firm, the acquisition of Strandflex did not prepare Fisk management to merge organizational cultures, resources, activities, or systems; and integrating an acquired firm with ongoing operations is a critical element of an effective acquisition strategy.

Brian Fisk has stated that growth might come from acquisitions of purpose (as opposed to acquisitions made for size) and that he would like to see the company able to acquire some little companies for strategic structural opportunities. Should the Fisk brothers decide to use an acquisition strategy for future growth or to take advantage of new opportunities, they must consider that their skill set is still limited in this regard. While it is possible to overcome their inexperience, there is still substantial risk associated with an acquisition strategy that is not backed with proven integration capabilities. Fisk is wise in his concern that expansion through an aggressive acquisition strategy could easily take the company into non-core territories. Also, initiating acquisitions “because growth is fun and challenging” is far from advisable.

The effectiveness of an acquisition strategy can be increased by seeking targets with complementary assets and resources for their potential to yield synergistic strengths that can lead to a competitive advantage. It is also important that financial slack be available to fund purchases. Other conditions which can improve the chances for a successful acquisition and integration include avoiding “unfriendly” acquisitions, conducting effective due diligence to properly establish the value of an acquisition, and selecting targets with low debt positions. Finally, it is important for Fisk Alloy Wire, Inc. to internally maintain its own product development skills (rather than depending on acquisitions to boost this capability) and to have organizational flexibility to handle changes associated with growth through acquisitions.

* ***Given Fisk Alloy Wire, Inc.’s current market position, outline the market opportunities available to the company, and explore their strategic potential.***

At the time of the case, Fisk Alloy Wire, Inc. is a $28 million firm with 3 divisions and 150 employees. The potential market for its cadmium-free high performance Percon 24 is estimated to be $30 to $40 million. Although the size and timing of this budding market are still uncertain, capturing it involves doubling revenues (and operational capacity). Fully developed, tested, and certified, and with no likely direct competitors, it appears that the firm can selectively pursue distinct market applications for Percon 24.

In addition to designing a strategy for building the Percon 24 market, Fisk Alloy Wire, Inc. has a need to expand business that optimizes its ultrafine stranded conductor capacity and enhances its profile in the conductor business through both higher volume and its specialty high performance product offerings. All of this activity is centered in the Fisk Alloy Conductor (FAC) division. Achieving these goals involves both increasing the volume of specialty alloys for electronic connectors and components and aligning markets with the company’s core high performance alloy wire process and production competencies. The company also needs to further develop its original specialty shaped wire business (FAW) to maximize volume and performance at its Hawthorne operations. While the case provides only limited information on Fisk Alloy Wire, Inc.’s internal electroplated wire unit, it is a capability that distinguishes the company from other wire producers as well as provides an opportunity to add value that is compatible with its platable metal finishes.

The table below features Fisk Alloy Wire, Inc.’s primary end use markets and identifies both positive and negative conditions in the sector that impact their attractiveness to the company in terms of current and future business potential.

|  |  |  |
| --- | --- | --- |
| Commercial End-Use | Pros | Cons |
| Military | - NAVAIR Certified – qualified producer  - Need for highly engineered products, thus copper alloys | - Exempt from RoHS directive  - DX order to fulfill contracts before other orders |
| Aerospace | - Certainty of growth  - Increasing demand of eco-friendly material  - Pre-qualified through NAVAIR  - Large material usage per unit  - Service requirements of applications fit with Fisk’s high performance quality (conductivity, strength, heat dissipation, vibration tolerance, etc.) | - Competitive market |
| Biomedical | - Miniaturization of components fits Fisk’s high performance quality (conductivity, strength, heat dissipation, vibration tolerance, etc.)  - Electric blankets, electrodes, and sensor cables require flexible copper alloy materials  - ‘Cannot-fail’ requirements can be met by Fisk’s high performance alloy products | - Not yet certified  - Developing market and applications, less defined |
| Automotive | - Increasingly electronic, especially in luxury vehicles, with higher performance needs that shift from copper alloy to high performance alloys  - New electric vehicles with increased material performance needs  - Already supplying major automotive components with Percon, inroads made | - Competitive market |
| Electronics and Computers | - Need for highly engineered products, thus copper alloys | - Competitive market |
| Telecommunications | - Miniaturization of components fits Fisk Alloy Wire Inc.’s high performance quality (conductivity, strength, heat dissipation, vibration tolerance, etc.) | - Decline in older applications using Fisk’s original shaped connector wire – product changes and offshore manufacturing |

Another factor that Fisk Alloy Wire, Inc. should consider in its strategic planning process is the profit potential for each commercial segment. Below is a table that reviews the company’s current volume, revenue, and revenue per pound based on the case data provided in Exhibit 3.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| End Use | Volume (Lbs.) | Volume % of Total | Revenue ($) | Dollar % of Total | Revenue per pound |
| Aerospace | 696,695 | 66.69% | $20,228,851 | 62.75% | $29.04 |
| Electronics | 193,912 | 18.56% | 5,679,423 | 17.62% | $29.29 |
| Medical | 110,566 | 10.58% | 4,073,513 | 12.64% | $36.84 |
| Military | 23,444 | 2.24% | 1,148,182 | 3.56% | $48.98 |
| Automotive | 11,655 | 1.12% | 695,815 | 2.16% | $59.70 |
| Jewelry | 7,527 | 0.72% | 404,779 | 1.26% | $53.78 |
| Misc. | 874 | 0.08% | 8,129 | 0.03% | $9.30 |
| Total | 1,044,673 | 100.00% | $32,238,693 | 100.00% | $30.86 |

Clearly, the automotive segment is the most profitable for Fisk Alloy Wire, Inc. in terms of revenue per pound. Skipping over the jewelry category (as it is outside the scope of the case material and represents very low volume), the military segment is the next most profitable end use segment. The medical category follows. Electronics and aerospace trail, with nearly half of the revenue per pound realized in automotive sales; however, together they represent 85.23% of the company’s tonnage and 80.37% of Fisk Alloy Wire, Inc.’s total revenues.

**STRATEGY**

* ***Identify the leading strategic priorities that are supported by the analysis. Explain your recommendations, and conclude with a statement of the key strategic issues facing the company.***

Based on the preceding analysis, the table at the top of the next page has been constructed to integrate the critical decision factors for Fisk Alloy Wire, Inc. The end use sectors are sorted according to their revenue per pound profitability; and current volume, revenue, and revenue per pound figures are entered in the first column. Next, each sector is cross-referenced to the company’s strategic groups: Fisk Alloy Wire (FAW – original shaped copper alloy), Fisk Alloy Conductor (FAC – high performance copper alloy), and Percon 24. A fourth space for a “Next Generation” category is also provided. The positives (pros) and negatives (cons) from the market opportunity analysis above are considered across these strategic groups, and suggestions are entered based on this assessment. Note that a box for certification status is also included next to the end use market category.

Keeping in mind the firm’s intent to (1) capture the $30 to $40 million Percon 24 market, (2) expand its profile in the conductor business through volume and specialty product offerings (FAC), and (3) increase volume in its original specialty shaped wire business (FAW), a set of strategic priorities begins to materialize.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| End-Use | C | Copper Alloy  (FAW) | HPA Specialty  (FAC) | Percon  24 | Next Gen. |
| Automotive  11,655 lbs.  $695,815  $59.70/lb. | -- | Competitive | High Growth  Highly Profitable  Product Fit  \*\*High Priority\*\* | High Growth  Highly Profitable  Product Fit  \*\*High Priority\*\* | \*\* |
| Military  23,444 lbs.  $1,148,182  $48.98/lb. | Certified | Product fit  Very profitable  \*Target volume \*  \*Isolate from HP\* |  | RoHS Exemption | \*\* |
| Biomedical  110,566 lbs.  $4,073,513  $36.84/lb. | \*\*Needed\*\* |  | Strong Growth  Profitable  Product Fit  \*\*High Priority\*\*  Begin Certification | Growth Potential  Profitable  Product Fit  \*\*High Priority\*\*  Begin Certification | \*\* |
| Electronics  696,695 lbs.  $20,228,851  $29.04/lb. | -- | Product fit  Competitive | Product fit | \*\*Monitor \*\* |  |
| Aerospace  193,912 lbs.  $5,679,423  $29.29/lb. | Certified | Competitive | Growth  Volume | High Growth  Product Fit  \*\*High Priority\*\* |  |

Integrating the analysis and priorities, a strategic plan can be devised for each of Fisk Alloy Wire, Inc.’s strategic groups.

Percon 24 – The company’s proprietary cadmium-free high performance copper alloy is clearly its most important strategic priority. Due to the high growth, high profitability, and demand for an environmentally-friendly product, Fisk Wire Alloy, Inc.’s market development strategy should begin with the automotive sector, where it has already made some inroads. The biomedical sector may be a longer-term prospect as the firm works through application development and acceptance phases. But due to the profitability and growth potential of the category, the company should be quick to begin the certification process for the most promising product uses. And finally, the high growth aerospace market is a key target market. However, due to its lower profitability, steps should be taken to try to increase revenues associated with these orders. Percon 24 is certified for airplane manufacturers, and a premium is reasonable for the product’s unique and unmatched qualities. While the electronics sector is losing ground for FAC, the company should continue to monitor changes, new product categories, and new regulations that would put Percon 24 at the forefront for component specification.

HPA Specialty – Even if its environmentally-safe alloy is slow to take off in the automotive market, the growth of luxury and electric vehicles and the high profitability of the sector makes this a high priority for FAC as well. While working through the certification process for Percon 24 biomedical applications, the company can be proactively seeking growth opportunities in the medical sector for HPA specialty uses, some which will also require certification. The lengthy qualification processes in new sectors requires that the company assertively move forward where desirable opportunities exist. The sooner the certification process is launched, the sooner the company can take advantage of profitable opportunities in the rich biomedical user category. In addition, FAC should keep an eye out for ultrafine wire applications that can exploit the company’s expanded fine-gauge capabilities.

Copper Alloy – To satisfy its objective of increasing volume for FAW operations, the company should target the military sector. The product fit and profitability for certified copper alloy materials suitable for high tonnage contracts is an excellent way to boost volume at Hawthorne. It is important, though, that this business be isolated from strategically important or highly profitable automotive operations to avoid the threat of having to sacrifice valuable commercial business to conform to the executive DX order. Note that most of the sectors in this strategic group are deemed less desirable due to their more competitive conditions.

Next Generation – As Fisk Alloy Wire, Inc. is fully aware, the new product and process innovation period can be quite extensive. While working closely with the end user segments, the company should be continually and actively building a conceptual basis for its “next generation” alloy(s). For all of the reasons that the development of Percon 24 has demonstrated, future success depends on an ongoing flow of high quality product offerings that meet new and valuable customer expectations. It makes sense to target the sectors that are most profitable today, but new opportunities can arise in any user category. Therefore, the company must stay alert to signs that occur throughout the broader metals and copper marketplaces.

Probably the most critical of Fisk Alloy Wire, Inc.’s key strategic issues is the need to expand operational capacity at a rate commensurate with sales growth. All 49 of the company’s newly-refurbished stranders are fully being utilized by current known demand. This is especially critical because of the unknown timing and scale of Percon 24 market growth – a condition that does not fit well with the high costs and lead times associated with the company’s customized equipment needs. The Fisks must remain vigilant and as accurately as possible estimate new production so that capacity does not become an impediment to growing sales. Navigating the lengthy certification process and monitoring new entrants and alternative products are also critical to dominating this strategically important product market. Meanwhile, continuing to expand Fisk Alloy Wire Inc.’s alloy and process technology development capabilities and its pool of qualified mechanics are also key strategic issues. With regard to the firm’s rate of growth, manageable growth is more suited to Fisk Alloy Wire, Inc.’s quality and excellence objectives and its focus on long-term profitability above overall size. It is more important for the company to sustain its reputation for excellence and technically-based competitive advantages than it is to adopt an aggressive growth strategy. Managed growth precludes the need for an aggressive acquisition strategy, but identification of a strong target that satisfies strategic objectives and the conditions described during the analysis should be strongly considered.