Cumberland metal industries

Science

In January of 1980, Cumberland Metal Industries (CMI) had developed a new product for the pile driving industry. Its new pad, made of tightly curled metal, had the potential to break into an industry where little or no innovation was taking place. The CMI product testing showed great efficiency gains over the current standard asbestos product. The existing competition consisted of small firms, few of which had the knowledge or resources to design and develop new products. CMI seemed on the verge of breaking into a new market, where its product would be the technological front-runner.

It now needed to show its customers the value its product would provide, and price its new product accordingly. Without any consideration to potential savings realized in the price of the product, the CMI pad provides additional value to the customer in two ways, time and safety. Using asbestos pads, a pile driver was able to drive approximately 150-160 feet per hour. Using the CMI pads, the same pile driver was able to drive 200 feet per hour. Additionally, the CMI pads never went above a temperature of 250oF, which allowed them to be handled almost immediately.

This increase in speed and resiliency accounted for a productivity increase of 33% faster driving time. With regards to safety, the CMI pad alleviates anyhealthhazard concerns, which many workers were starting to feel towards the asbestos pads. This in the long run could save the customer significantmoneyin healthcare costs and legal fees, should asbestos be proven to cause health concerns. The primary target market for the CMI pad would be the Engineering/Construction contractors and Independent pile-driving contractors.

These two categories would benefit the most from a lower cost alternative to asbestos, as well as from the time and safety efficiencies. The secondary target market would be the Pile Hammer Distributors and Renting companies. This category may be less welcoming to the CMI pads, as the efficiencies realized by the contractors could translate into lost revenues due to fewer pads being needed and equipment being returned early. Part of the promotional aspect of this product launch should focus on the industry subject matter experts, the Pile Hammer Manufacturers, and the Architectural/Consulting Engineers.

While these groups would not directly purchase this product, their opinions and specifications would be influential to the target markets. CMI had already submitted its pad for testing to Professor R. Stephen McCormack of Pennsylvania A&M University, who is well respected in the pile-driving field. While his results are not available, early indications are that his findings will be favorable. Should that be the case, CMI should promote these findings to the manufacturers and engineers, and work with them to have the CMI pads legitimized as a viable option within the industry.

In deciding where to set the price on the new pads, CMI must first review its manufacturing costs, as well as determine the value its product would bring to its clients. The projected manufacturing costs are outlined in Table 1, with one option showing the costs using existing equipment, and the other showing the costs with a $50, 000 investment in new permanent tooling equipment. Table 1 [pic] As is shown in Table 1, the permanent tooling reduces manufacturing costs by 53%. CMI would have to sell 633 units to

break even on the initial $50, 000 investment, however in my opinionI believethis is well worth it.

By lowering its manufacturing costs, CMI can increase its margins, as well as increase its maneuverability with the product price. I will therefore base my pricing decision on the assumption that CMI invested in the permanent tooling equipment. CMI senior management has indicated that they are looking to receive a 50% margin on this product. Therefore, the minimum price option to be considered is $138. 36 per pad. Part of CMI’s product testing included providing the pads to two responsible contractors, Colerick Foundation Company and Fazio Construction, for them to test against the asbestos pads in working conditions.

From the Colerick test, we learned that the contractor would have needed 480 asbestos pads, at a total cost of $1, 000, to complete the job. In comparison, only 6 CMI pads would have been required. Therefore, in this situation, the exact comparable price per the job costs for a CMI pad to an asbestos pad would be ($1, 000/6) $166. 66 per pad. The total number of feet for the job was 15, 000, and from the test results we learned that the asbestos pads lasted for 31. 25 feet of pile driving, while the CMI pads lasted for 2, 500. This translates into 80 asbestos pads needed for everyone one CMI pad.

The average price of an asbestos pad is $3. 00; therefore the value to the contractor of a CMI pad would be (80 x $3) $240. In the Fazio test, the contractor would have used 600 asbestos pads, at a total job cost of $2, 000. Again, in comparison, only 5 CMI pads would have been needed. In this

instance, the comparable price of a CMI pad would be ($2, 000/5) $400 per pad. The total number of feet for this job was 12, 000, and from these test results we learned that the asbestos pads lasted for 20 feet of pile driving, while the CMI pads lasted for 2, 400.

In this example, 120 asbestos pads would be needed for every one CMI pad. The value of a CMI pad to this contractor would be (120 x $3) $360. While these results vary somewhat, they clearly show that the CMI pads last significantly longer than the current asbestos pads. For the purpose of determining price, I will extrapolate from the findings that a CMI pad lasts for 2, 500 feet of pile driving, while an asbestos pad last for 25 feet of pile driving. Therefore, the value of one CMI pad to a contractor is comparable to 100 asbestos pads.

Given the asbestos price of $3. 00 per pad, the dollar value of a CMI pad to a contractor is $300 per pad. Because CMI is the first to enter the market, with relatively weak competition, and protection from a patent, I recommend a skimming pricing strategy, with a focus on customer value. As a result, I would price the CMI pad at $162 per pad to our distributors, with an MSRP of $270. This would allow the distributors to market the product at a 10% price discount over asbestos, as well as the 33% increase in time productivity, and achieve a 40% margin.

Due to the limited initial manufacturing volume of 250 pads per month, I believe the best course of action is to maximize possible revenue on each pad, rather than try for market penetration. The price of $162 would provide CMI a margin of 57. 5%, which exceeds the requirement of senior

management, and would allow the company to invest in future research and development, or perhaps an advertising program should it wish to increase market share in the future.