

# Curled metal inc essay



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Case: Curled Metal Inc. (CMI) Introduction Curled Metal Inc. originally sold metal as a finished good but has later developed its business concept to transforming metals into high value added manufactured products. Early in 2008, the company was about to launch a new product, which could revolutionize its business, setting a new standard in the pile-driving market: CMI cushion pads.

However, this product launch poses key strategic issues to the company, ranging from assessing manufacturing capacity to defining the product value proposition. In the roadmap to the launch CMI has also to consider how to approach the market, identifying key customers or/and influencers, positioning its new product, assessing distribution alternatives and essentially computing an adequate selling price, one that could guarantee the company's success.

The cushion-pads market in the pile-driving industry Despite the importance of cushion pads to the pile-driving process, the market is quite immature, considering that there are no consistent available solutions. The existing cushion pads do not result from a manufacturing process, with different products and competitors, but from ad-hoc solutions resulting from simply cutting pieces of aluminum and micarta with the required dimensions. The most common diameter of the pads is 11 ? inches, with a direct connection with the usual size of the piles to be driven.

From the data provided, it is possible to compute the market size, considering two different scenarios, as follows: ANNUAL POTENTIAL MARKET (feet driven) Pile hammers owned by pile-driving companies Leased pile

hammers (min / max) Total pile hammers in industry (i) Weeks of use per year (ii) Hours of use per week (iii) Standard average actual driving speed (feet/hour) (iv) Total amount of feet of piles driven annually (v) = (i) x (ii) x (iii) x (iv)

Pessimistic	13.000	6.500	19.500	25	30	20	292.500.000
Optimistic	13.000	13.000	26.000	25	30	20	390.000.000

As a result of introducing a new product, specially designed to the purpose of effective pile-driving, CMI should define an ambitious marketing objective, setting an expected market share in its first year of operation somewhere around 5% to 10% of the total market, aligned with the strategic objectives of shaping a new market and assuming in the medium term the role of major player. Applying this assumption, and again considering a combination of scenarios, it is possible to compute the product demand forecast for CMI pads, both in terms of feet driven and number of pads to sell: 1

PRODUCT DEMAND FORECAST FOR CMI PADS (feet driven) CMI expected market share (volume) - Assumed for first year of operation Market Forecast

PRODUCT DEMAND FORECAST FOR CMI PADS (n? of pads) Feet driven for each set of CMI pads (\*) (vi) Number of CMI pads for each set of pads (vii) Number of CMI pads demand (1st year of operation) (viii) = (Market Forecast / (vi)) x (vii) Average scenario of demanded CMI pads (both scenarios with same probability) (\*) 15.000 Experiment by Kendrick Foundation Company 12.000 Experiment by Corey Construction Pessimistic 5% 14.625.000 Optimistic 10% 39.000.00 15.000 4 3.900 11.700 12.000 6 19.500

Situation Analysis Looking at the industry as whole, the cushion pads market can be considered as a brand-new one. In fact, there are no organized competitors, providing CMI a privileged position, should the company be able

to effectively approach the potential customers. These customers (contractors) tend to be price sensitive, considering that until now, the pads have been considered an undifferentiated product. However, they also reveal other concerns, such as how fast can they drive piles or personnel safety issues, when handling equipments.

In what concerns potential entrants, it appears that there are few companies either with the interest or the ability to compete with CMI in technical or product development aspects. Also, with appropriate patent protections, the entry barriers for potential competitors are set at a high level. Of course there are substitute products for CMI pads. In fact, these are the products being used in the pile-driving industry, before the launch of CMI pads. However, the advantages of CMI pads (as described below) will tend to outperform any other substitute.

On the other hand, the supplier's power does not pose an issue for the pads industry, as different materials / metals can be used to produce or to "improvise" pads. In the overall situation analysis, the main aspects to consider in developing a marketing strategy are the following:

- The customers present primarily a utilitarian need: Contractors want to be able to finish their piledriving works as fast as possible and to reduce their costs of operation. Therefore, their focus is clearly put on product performance vs. cost, but also on technical competence, as some projects present high levels of sophistication.
- The pads demand is influenced by the economic environment, which affects similarly all the players. CMI business is affected namely by the construction (and pile-driving) market trends. Acting as a provider of this dependent submarket, CMI has limited alternatives, other

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than expanding its market share, to counter an adverse economic environment. • Historically, CMI has competed through its technical competence and by its product performance, presenting superior products as result of effective R&D processes. Other collaborators / prescribers / influencers have an important role in the market. As CMI prepares to launch a new revolutionary product, the relationships the company establishes with these players will be of extreme importance, namely with: Pile-hammer manufacturers, architectural and consulting engineers, pile-hammers renting companies and scholars/researchers (as positive or negative influencers) or distributors and sales representatives (as channels to reach the costumers).

**SWOT Analysis** As a result of the situation analysis it is possible to summarize an overall SWOT analysis for CMI, as follows: Strengths Technical competence Effective R&D processes Weaknesses Access to Influencers / distribution channels; Access to end costumers / contractors; Inexperience in the pile-driving industry Product performance (best in class) Opportunities Open a new market Reduced level of direct competition Definition of a new standard - first mover Customer's price sensitiveness;

Threats Customers may not perceive new product value(s) Availability of substitute products; Potential new competitor's imitation; Potential adverse economic environment Segmentation / Targeting / Positioning for CMI

**Cushion Pads** As a first mover in the niche market of cushion pads, and given the technical and other resources availability, CMI could address the market as a whole. In fact, in terms of product specifications, the only possible market segmentation resides on the size of the pads.

Considering that the 11 ? inches pads are the most common, probably CMI should consider this size when developing its standard offer to potential customers. However, for some projects, other sizes may be required, what should not pose significant issues for the company, and therefore, the size of the pads should not be a constraint for the objective of expanding CMI's market share.

However, considering the two different types of potential customers - Engineering/construction contractors and independent pile-driving contractors - although CMI could address them as a whole, as they present the same needs, in order to guarantee a fast expansion of its market share while gaining credibility in the market, CMI should target the engineer/construction large contractors who typically participate in the bigger jobs, developing adequate distribution and promotion strategies.

The positioning of CMI follows from the understanding of the customer's needs and should try to address them while presenting the core attributes of the company's cushion pads. Performance, both in terms of quality and time savings, as well as costs savings represent the key drivers. Also, the CMI offer, targeted at bigger pile-driving jobs will provide a greater value, considering that the time savings, with a significant effect over the contractor's global costs, will play an even greater role. In a sentence, CMI's positioning could be expressed as " Get the job done... faster! Marketing Strategy The CMI cushion pads address the same needs of conventional pads, but in a revolutionary manner that can indeed shape the market. The core product provides for an effective pile-driving process. However, it reaches clearly further than conventional pads. Its valuation by potential

customers is related essentially with the following factors: i. Performance (smaller dissipation of energy providing for a more efficient use of the pile-driving equipments; longer useful life of both the pads and the other equipments); ii.

Time savings (faster pile-driving time, significantly reduces number of pads changes and reduced time for required changeovers); iii. Health and safety (no use of hazardous materials; greater safety in cushion pads handling). The first two factors account for significant time and cost savings, which are critical for contractors as they present their bids by estimating the time it would take to drive the specified distances, computing the associated costs and adding a profit margin.

Also, being able to finish a job faster (around 25% faster according to computations presented below) allows the contractors to engage in more jobs, maximizing the use of expensive rented or own-purchased pile-driving equipment (hammer, crane, etc. ) and thus, their own profitability. The third factor is more intangible, but may also reveal itself of great interest for some specific customers (namely for larger ones - the ones CMI should target).

One of the main issues for CMI, while introducing this market rupture and a clear differentiation strategy, is therefore the challenge of establishing itself as a new but credible player in the pile-driving industry. This challenge can be met through the augmented product definition, setting an important point of difference to actual and potential competitors: CMI provides the best in class product in a structured, professional and competent manner, but it also should provide a warranty program - "satisfied or reimbursed"

(considering that it is probable that customers tend to be suspicious of a product that advocates such a better performance) and a technical support/customer service, in order to address sophisticated demands from large customers with very specialized projects. In order to achieve its marketing objectives, the company has also some production decisions to make, namely concerning its manufacturing capacity and manufacturing costs (considering different options of acquiring new equipments and/or purchasing permanent tooling). According to the potential market size and to the estimated product demand (n? of pads to sell), the following computations provide the basis for these decisions:

Capacity Actual CMI Capacity (annual)	Projected CMI Pads demand (1st year)	CMI Pads manufacturing overcapacity	Additional capacity added = 3 new production lines	Total installed capacity after investment in new production lines	CMI Pads manufacturing overcapacity
3.00	11.700	-8.700	9.000	12.000	300

Accordingly, the company should invest in equipment to increase manufacturing capacity at this time, assuming exclusive production of 11 1/2-inch size pads (the most popular size) - CMI finance personnel believes the capacity would not change that much, even considering a mix of sizes. The capacity increase will represent a considerable financial effort amounting to \$1.275.000 (3x\$225.000 for the 3 new production lines + 4x\$150.00 for the permanent tooling for each line), but it will be worth it for CMI.

Manufacturing Cost Estimates for 11 1/2 inches pad size unit (in \$)

Based on Exhibit 6 Variable Costs Materials Labor Fixed Costs Scenario 1)

Assumes maximum capacity / year and 360% labor overhead 360% direct labor overhead for each production line Permanent Tooling Use (assuming 5 years of life) Additional equipment (3 new production lines) use (assuming 5

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years of life) TOTAL MANUFACTURING UNIT COSTS Scenario 1) Scenario 2)  
 Assumes 11.00 units / year and 360% labor overhead 360% direct labor  
 overhead for each production line Permanent Tooling Use (assuming 5 years  
 of life) Additional equipment (3 new production lines) use (assuming 5 years  
 of life) TOTAL MANUFACTURING UNIT COSTS Scenario 2) Total with Additional  
 Purchase of equipments to meet \$150,000 permanent demand (3 new  
 Existing Equipment tooling production lines) Total with Additional  
 equipments (3 new production lines) + 4 permanent tooling 46,928.64, 46,  
 923.4, 924.6, 928.6, 44.6, 923.4, 9231.1, 040044.4, 3612.5, 710.000, 00  
 217, 5424.4, 1601.1, 3138.8, 7350.2, 8101.1, 360.5, 8931.1, 040044.4, 36  
 12.5, 710.000, 0021.7, 5412.76, 060.001.1, 5414.20, 9251.5, 6910.26  
 1.1, 5461.9, 33 Regarding manufacturing costs, clearly, the option of  
 purchasing 3 new production lines as well as four sets of permanent tooling  
 worth \$150,000/each provides for a smaller unit cost, set to about \$620 per  
 cushion pad. This unit cost sets the primary floor for an eventual pricing  
 definition. However, assuming a conservative approach (implying a 50%  
 margin of selling price expected by corporate management and a standard  
 40% distributor's margin) a final end-consumer total floor price could be set  
 at about \$1,734, as demonstrated in the following calculations: Computation  
 of minimum end-customer final unit price for CMI pads (\$) Manufacturing  
 Unit Cost Margin of selling price Selling price floor Average Distributors  
 margin Selling price floor + Distribution Margin 619.33 50% 1,238.7 40% 1,  
 734.1 Apart from this floor price reference, CMI should consider other  
 factors when setting the price. Usually, competitors pricing should be a  
 reference.

Yet, in this case, given that there are no really other alike products, CMI should determine how much a customer would be willing to pay for this new cushion pad, and of course, that amount would result directly from the customer's valuation of the product, quantified at least by the direct overall cost savings provided, amounting to some 29% of total contractors costs (calculations using the data from CMI experiences): COST SAVINGS

PROVIDED BY CMI PADS Cost Savings for contractors using CMI pads (except pads cost) Kendrick Experience \$ (I) 35. 477 Corey Experience \$ (II) 31. 61 Global Cost Savings \$ 66. 938 Global Cost Savings % 29% The amount of 29% of total costs only takes into account immediate savings, ignoring potential gains from a most efficient use of pile-driving equipment (possibility of using the same equipment in more jobs) or other, like health and safety savings. Please refer to appendix 1 for detailed cost savings and pricing computations. A neutral selling price for CMI pads against conventional ones would reflect the above mentioned savings and according to calculations made, would amount, in average, to \$6. 52 per pad. However, given the radical product innovation proposed by CMI, in order to rapidly acquire market share before a potential competitor reaction, while establishing its credibility as a market player, the company should adopt a penetration pricing strategy, at least during the first year of operation.

Assuming a 15% discount over the neutrality price referred above, setting it at an average amount of \$5. 10 per pad (adaptable accordingly with specific project needs), a significant portion of the product benefits would still be transferred to the customers but, even so, CMI would ensure very high profitability levels, which are important given the fact that the durability of CMI pads pose significant constraints on sales volumes. This rate of discount

should however be monitored on a permanent basis, in order to capture insights over the customer's sensibility to price variations (with this price, the average cost savings for customers amount to approximately 5% of total project costs). On subsequent years, ensuring a strong market position, CMI could even set the prices at higher levels: after gathering relevant market experience, developed better relations with customers and influencers and refined the communication of the product value proposition, it would be possible to gain a share of the intangible (and hard to measure) savings offered to customers (namely the fact they can engage in more jobs than before, using the same resources, thanks to a faster pace of pile-driving).

Finally, the proposed approach to the product placement and promotion, aligned with the company's marketing and strategic objectives, is based on three main components: i. Development of a highly trained and experienced own sales force, with the appropriate tools to communicate the product values (cost savings provided to customers and proven product performance); ii. Aligned communications with the company's positioning, targeting large engineering and construction contractors and important influencers as architectural/consulting engineers or respected authorities (e. . Pennsylvania A&M University). The establishment of strong relationships with these players will provide relevant feedback, which can be used effectively by the sales force (that assumes not only a placement function, but also a promotion one); iii. Reinforcement of CMI awareness and credibility both through the participation in industry seminars, workshops and professional fairs and the development of warranty programs and technical/customer service support. Conclusion Curled Metal Inc. s about to

shape the fundamentals of a niche market, integrated in the pile-driving industry. Offering a best in class product, supported by its augmented definition, the company assumes a first mover position and sets the ambitious strategic goal of becoming a major player in the cushion pads business. Introducing such a disruptive product, one of the main issues for CMI is ensuring that customers recognize the benefits associated with CMI pads, valuing them against the respective selling price.

Therefore, setting an appropriate price is crucial in the implementation of the company's strategy: one that transfers significant savings to customers, persuading them to buy, but also that ensures high profitability for CMI. In the meanwhile, the sales force should work on the credibility reinforcement of the company and gain the ability to start as well "selling" other intangible gains not considered in the initial pricing / value proposition.

In summary, the company expectations of doubling its sales were not overoptimistic. In fact, even with a reduced market share (5 to 10%), it would sell about 11.700 cushion pads per year at the set price, resulting in total new sales of \$69 million, against the actual sales amounting to \$55 million. Therefore, a successful launch of this product, at the right pricing, indeed has a major impact over the company's finances and profitability.

For sure, according with the developed scenarios, the revenues originated by a product with significant expected sales volumes, with a 90% gross margin/contribution have the ability to dramatically transform the fundamentals of the business. The new cash inflows will provide the company with the necessary resources to pursue even more effective

research and development processes, to improve the company's core competencies and to keep launching new high value-added products, guaranteeing CMI's sustainability over the long term. 8 Appendix 1 - Computation of contractor's Gross Margin / Cost Savings / CMI cushion pads pricing

Computation of contractor's gross margin using conventional 11 1/2 inch pads  
 Number of piles driven (i) Feet per pile (ii) Total feet driven (iii) = (i) x (ii)  
 Feet driven per hour (without downtime) (iv) Hours of operation (without downtime) (v) = (iii) / (iv)  
 Downtime estimation - moving crane (30 minutes/hour of operation) (vi) Downtime - changing pads sets (20 minutes/change) (vii) Total hours of operation (viii) = (v) + (vi) + (vii)

Additional downtime - delays / mistakes (12, 5% of total operation time) (ix) = (viii) x 12, 5%  
 Total time spent in hours (x) Average cost per real hour for the contractor in \$ (Table A) (xi) Contractor costs (except pads cost) (xii) = (x) x (xi)  
 Kendrick Foundation (I) 300, 0 50, 0 15. 000, 0 150, 0 100, 0 50, 0 6, 7 156, 7  
 Corey Construction (II) 300, 0 40, 0 12. 000, 0 160, 0 75, 0 37, 5 16, 7 129, 2  
 CMI Pads (I) 300, 0 50, 0 15. 000, 0 200, 0 75, 0 37, 5 0, 0 112, 5  
 CMI Pads (II) 300, 0 40, 0 12. 000, 0 200, 0 60, 0 30, 0 0, 0 90, 0 19, 6 176, 3  
 714, 0 125. 842, 5 6, 1 145, 3 714, 0 103. 753, 1 14, 1 126, 6 714, 0 90.

365, 6 11, 3 CMI PADS PRICING (\$) 101, 3 714, 0 72. 292, 5 COST SAVINGS PROVIDED BY CMI PADS  
 Cost Savings for contractors using CMI pads (except pads) Conventional Pads cost Total Costs - set CMI pads price neutral to contractors  
 Number of required pads Price per pad AVERAGE PRICE PER PAD CMI PRICE APPLYING A 15% SELLING PRICE DISCOUNT  
 CMI Pads Unit Cost of Manufacturing CMI UNIT MARGIN Kendrick Corey Experience \$ (II) Experience

\$ (I) 35. 477 3. 000 38. 477 6 6. 413 6. 952, 47 5. 909, 60 619, 33 5. 290, 27  
 89, 5% 31. 461 6. 000 37. 461 5 7. 492 Global Cost Savings \$ 66. 938 0 66.  
 938 Global Cost Savings % 29% 0 29%

Piles driven per set of pads (a) Feet driven per set of pads (b) = (a) x (ii)  
 Number of pads per set (c) Feet driven per pad (d) = (b) / (c) Total pads  
 needed (e) = (iii) / (d) Cost per set of pads \$ (f) Cost per pad \$ (g) = (f) / (c)  
 Total pads costs \$ (h) = (e) x (g) Total costs for the contractor \$ (j) = (xii) +  
 (h) Total costs per foot for the contractor \$ (j) / (iii) AVERAGE Revenue per  
 foot for the contractor \$ AVERAGE GROSS MARGIN PER FOOT FOR THE  
 CONTRACTOR \$ GROSS AVERAGE MARGIN PER FOOT FOR THE CONTRACTOR  
 \$ 15, 0 750, 0 24, 0 31, 3 480, 0 150, 0 6, 3 3. 000, 0 128. 842, 5 8, 6 8, 9  
 15, 0 21, 0 6, 4 12, 1 6, 0 240, 0 12, 0 20, 0 600, 0 120, 0 10, 0 6. 000, 0  
 109. 753, 1 9, 1 300, 0 15. 000, 0 6, 0 2. 500, 0 6, 0 30. 781, 5 5. 909, 6 35.  
 457, 6 125. 823, 2 8, 4 8, 4 15, 0 21, 0 6, 6 12, 6 300, 0 12. 000, 0 5, 0 2.  
 400, 0 5, 0 29. 968, 5 5. 909, 6 29. 548, 0 101. 840, 5 FINAL COST SAVINGS  
 WITH A SET PRICE OF \$5. 909, 6 PER PAD 8, 5 Cost Savings for contractors  
 using CMI pads 27, 0 Kendrick Corey Experience Experience \$ (I) \$ (II) 3. 019  
 7. 913 Global Cost Savings \$ 10. 932 Global Cost Savings % 5% 27, 0 17, 9  
 18, 5 9