Executive Summary
A go to Market Strategy for a Fusible Alloy Product Geared Towards 3D Metal Printing

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Indium Corporation is a premier materials refiner, smelter, manufacturer, and supplier to the global electronics, semiconductor, thin-film, and thermal management markets. Within Indium Corporation, the Metals and Compounds division encompasses the fusible alloy (FA) product line. These alloys are characterized by their particularly low melting points in the 45-190°C range, which allow them to be used in many different interesting applications and industries.

This summer I served as the Product Management Intern within the Metals and Compounds division. During my 13-week long internship I took a two-pronged approach to help drive growth within the FAs product line.

The initial part of the internship was spent developing an interactive tool that would allow the FA sales team to gain insights about their sales in recent years. The goal of the tool was to classify sales into different end-use industries, geographic regions, and melting points to better understand the attractiveness of each industry and highlight important opportunities for growth. Conclusions from the initial analysis have already started guiding future sales efforts. Similarly, the tool confirmed our confidence that we could find success by expanding sales into a new industry, additive manufacturing.

The second, and main, part of the internship focused on expanding FA sales through the introduction of a new FA product geared towards 3D metal printing. The current bottleneck in Direct Metal Laser Sintering (DMLS), the most used 3D metal printing technology, is separating the printed part from the build plate on which it is printed on and is usually done with the use of an electrical discharge machine (EDM). The cost of an EDM ranges in the hundreds of thousands of dollars and can take several hours to remove printed parts. Our proposed solution modifies the build plate with a FA insert so that parts can be melted off in minutes. This removes the use of an EDM, effectively reducing the time and cost of removal.

My work this summer was developing the go to market strategy for this product which included assessing technical feasibility, identifying and ranking potential customers, establishing a pricing strategy, and modeling potential revenue.

Successful prints and releases were done on our prototype at the beginning of the summer. Finding the FA with the right thermal and physical properties represented the significant milestone of a proof of concept. I proceeded to find potential customers that had printers compatible with our technology. This included printer manufacturers and printing service providers. I then created a database and an interactive tool that mapped out potential customers in the US and ranked them based on several pertinent factors to determine their attractiveness to Indium Corporation. The pricing strategy included both a cost analysis (bottom up) and a value-added analysis (top down). The cost analysis calculated how much it will cost Indium Corporation to make the build plate with the FA insert while the value-added analysis identified the cost of using the current technology (EDM) to use as a benchmark. The potential revenue model segments forecasts sales based on the compatibility of printers with our current prototype and forecasted adoption rates. Assumptions for the model rely on a collection of inputs including market reports, interviews, and articles.

Going forward the team should be able to continue to use the interactive tool that shows potential customers and refine the ranking system as needed. The tool can be easily updated as our product improves and becomes compatible with more printers. The pricing strategy will become pertinent once the product is launched in the following weeks.