

## **EXECUTIVE SUMMARY**

**Ask: US\$ 1.3 Million**

**Offer: NPV US \$4.07 Million (50% Discount Rate)**

**IRR: 65%, Payback Period = 5 Yrs**

**GISSCO** Limited was established in 2005 to develop and commercialize a Gas Induced Semi-Solid (GISS) system to be used in the aluminum die casting industry. The market for aluminum usage in the automotive industry has increased continuously with the aluminum content of cars predicted to double within the next ten years. Thus, by the year 2010, the size of aluminum structural car assembly is anticipated to be a US \$2.8 billion market.<sup>1</sup> The effort of car manufacturers to reduce car weight has been a significant driver of the enormous increase in aluminum consumption. Audi, which launched an all-aluminum car in 1994,<sup>2</sup> is an outstanding example of this development among car manufacturers. Aluminum, the leading material for an excellent light-weight solution without sacrificing reliability, safety and comfort, is the material of choice for many automotive applications and has already replaced many steel parts. As a result, the market size of the aluminum die casting industry is increasing. In 2005, the market for aluminum die casting machines was US \$16.7 billion and is annually growing at the rate of 12.5%.

However, the traditional die casting process does not yield aluminum of sufficient strength to replace those steel parts that require strength at the very time when car manufacturers are exerting more downward pressure on their suppliers due to the intense competition in the car industry. As a result, car manufacturers have forced aluminum part manufacturers to reduce their manufacturing costs. Although the current technology based on **3Semi-Solid Metal (SSM)** can improve the mechanical property compared to the traditional process, it is prohibitively expensive.

**GISSCO** was formed to commercialize the patented and innovative SSM technology, giving the same benefits as the current SSM process but at a significantly cheaper price. This superior technology was invented by Dr. Jessada Wannasin from the Massachusetts Institute of Technology (MIT) under the supervision of Dr. M.C. Flemings, the discoverer of SSM casting.

GISS Technology is not only 60% cheaper than the current SSM thixocasting technology, but is also superior to the traditional casting process due to a 17.6% cost reduction. Therefore, GISS Technology has the potential to replace the traditional aluminum casting process and yield many other aluminum applications because of its superior strength.

**GISSCO** will enter the market by developing and manufacturing the **GISS System** at its production plant in Thailand. The **GISS System**, an add-on unit that transforms liquid aluminum to a semi-solid state before it is injected into the mold, thus improving the mechanical property of the aluminum part, is

significantly different from traditional die casting, in which aluminum is injected into a liquid state, a process which yields less strength. To secure intellectual property protection of the GISS Technology, **GISSCO** will sell the finished product, the **GISS System**, to machine makers, who in turn will provide the machine to aluminum part manufacturers. **GISSCO** will keep its manufacturing process a trade secret. Furthermore, because **GISSCO** can control the consistency of its product quality, economies of scale will yield additional benefits and facilitate the marketing of the **GISSCO** brand. Machine makers can either sell the **GISS System** as an add-on product to their existing customers or integrate the product into their own machines, thereby allowing them to charge a higher price since the new machines give higher benefits to the customers. The **GISSCO** management team will sell the **GISS System** to machine makers at a price of US \$175,000 while the unit cost is estimated to be US \$30,000. The price that machine makers can sell to aluminum part manufacturers will be set at US \$375,000. Machine makers will gain an attractive profit of US \$200,000 in the process of encouraging aluminum part manufacturers to use our product. The **GISS System** will provide an estimated cost savings benefit to aluminum part manufacturers of US \$1 million which they can recoup within one year.

**GISSCO** revenue is anticipated to begin in the year 2007 and grow to US \$43 million in 2011 based on conservative assumptions about the market environment. The business plan will yield an **NPV of US \$10 million** at a discount rate of 50%, have a projected **IRR of 121%** and payback period of 2 years. **GISSCO** is seeking an injection of US \$1.3 million. In return, the investor(s) will receive an equity stake of 40% and 2 seats out of 6 on the Board of Directors. Their investment will yield an **NPV of \$0.99 million**, an **IRR of 65%**, and a payback period of 5 years for the investor(s). The **GISSCO** management team feels that the proposed business plan is a very lucrative investment opportunity and looks forward to discussions with the investor(s).