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Making Money in the

# $TEEL INDUSTRY

Is Not a Mystery

## AISTech 2014 President's Award Breakfast Keynote Address

**Presented by Mark D. Millett, president and chief executive officer, Steel Dynamics Inc., AIST 2014 Steelmaker of the Year and AIST 2014 William T. Hogan, S.J. Lecture Awardee. Mr. Millett spoke before a gathering of more than 1,200 people at the AISTech 2014 President's Award Breakfast in Indianapolis, Ind., USA.**

We're all invested in the steel industry in some way. So let's take a look at how we're doing, including the challenges, the opportunities and where we might be headed.

The steel industry's history of profitability is not without blemish (Figure 1). It has not been easy to make money in steel — for mills or suppliers — but it is definitely not impossible, and certainly not a mystery!

It is also evident that certain companies maintain financial metrics significantly above others — fortunately, Steel Dynamics Inc. (SDI) is one — and hopefully I can add some color as to how a company can position itself to achieve a more prosperous future.

But just "making money" isn't the key issue. You need to make enough to reinvest in your business, create opportunities for your employees and have the capacity to grow. Through the cycle, we need to generate returns in excess of our cost of capital to do these things.

History has shown the devastating effects when we don't. We saw it in the period leading up to 2002, when downward price spirals and a less operationally efficient industry drove more than 45% of steel producers into some form of insolvency. This was the catalyst of considerable rationalization and consolidation that has continued through today.

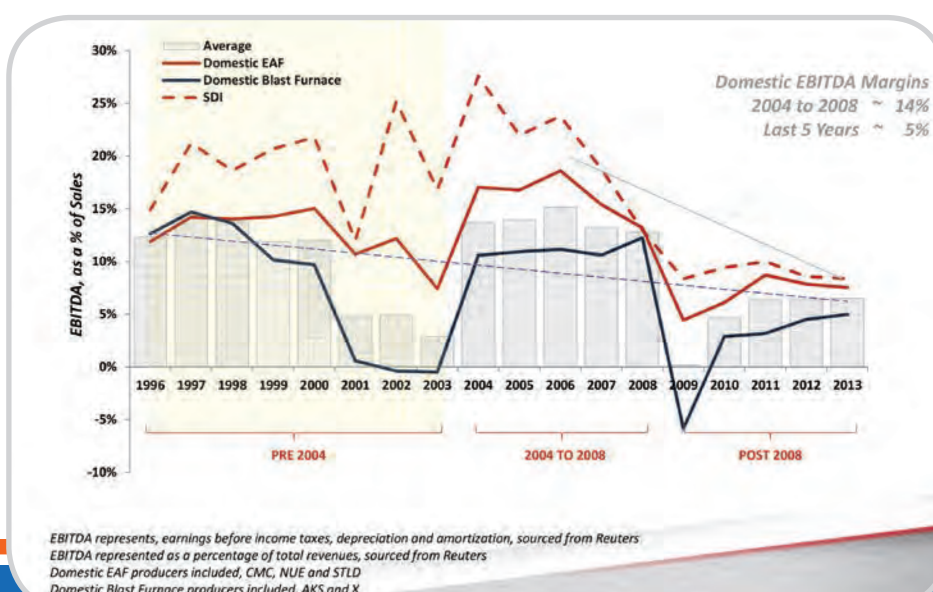



**Figure 1**
The industry's track record: U.S. EBITDA margins declining.

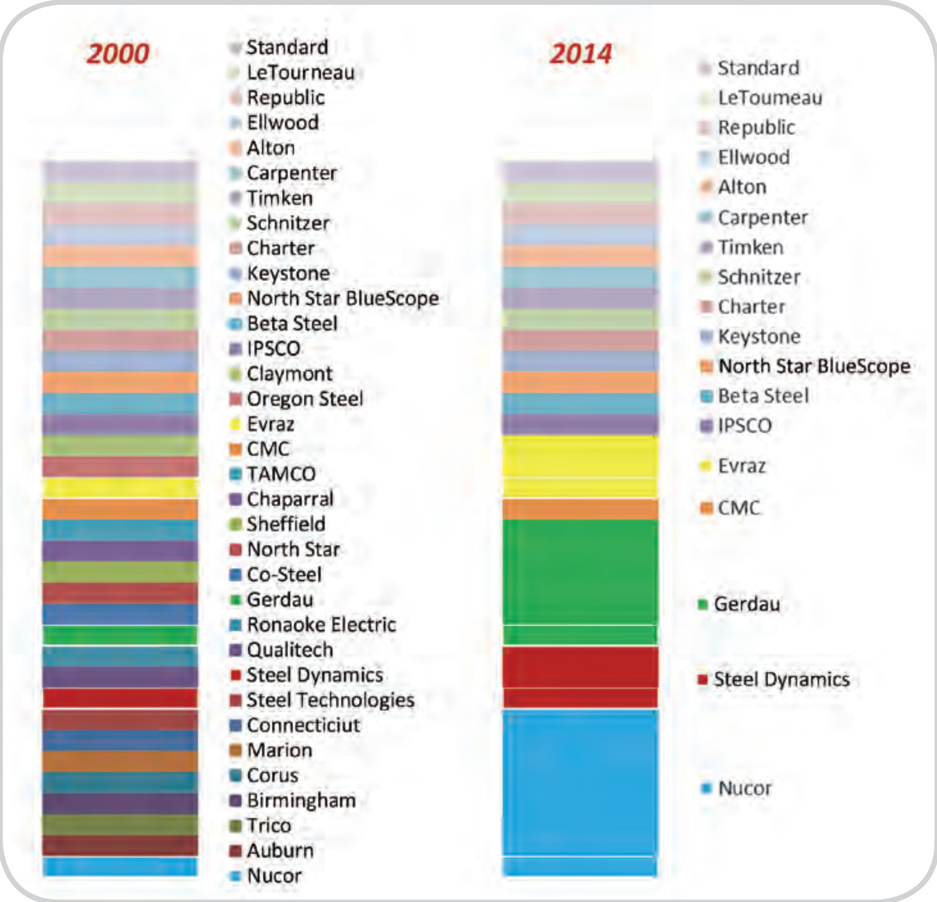



Figure 2
EAF consolidation, while a fragmented base remians.

Many of the less efficient electric arc furnace producers have been acquired (Figure 2). It surprises me how quickly we forget their names. Much of the capacity remains intact today — just under new ownership. Some things we recognize: EAF producers are the beneficiaries of lower fixed costs. They have the ability to quickly adapt production volume to meet demand. They also have performance-driven labor costs tied to production, and in some cases profitability. The resulting high variability within their cost structure — 85% at SDI — sustains financial viability even in the toughest of times.

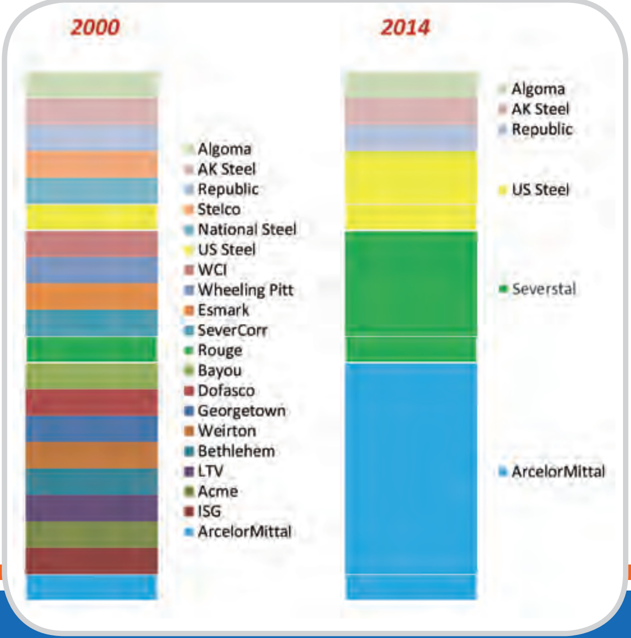
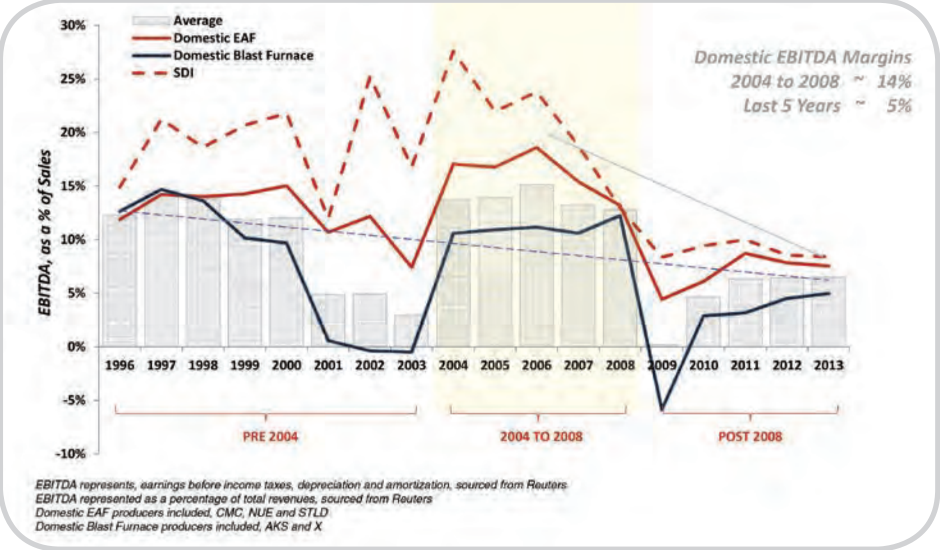



Figure 3
Blast furnace consolidation. Half of the top 10 steel producers today are international with global networks, compared to only one producer in 2000.

Figure 4
A strong market environment existed in the U.S. from 2004 to 2008.




## Integrated Consolidation and Rationalization

Integrated producers have a more difficult situation. They carry the burden of very high fixed costs. Equipment constraints don't allow them to as effectively match production to demand. They just don't have the same flexibility within their current cost structures — and as a result, have shouldered the brunt of the most turbulent time in our collective history. Fewer names remain in this pool.

When we founded SDI in 1993, there were some 55 steel producers. Today, in total, we number just 24 — over half are gone.

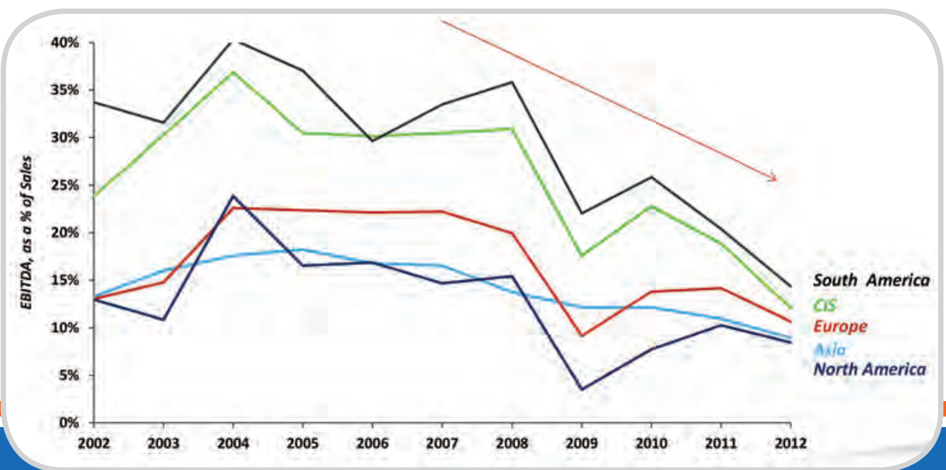
During this time, ownership has changed such that half of the top 10 producers have international ownership with global networks (Figure 3). Today, the top three producers collectively represent 70% of the nation's capacity — yet the base still remains highly fragmented. Further consolidation is inevitable. However, cultural differences between integrated and EAF companies may delay meaningful consolidation.

## Industry Track Record

With the explosive growth of China in the mid-2000s, a stronger industry was well-positioned to capitalize on the high levels of utilization and strong market environment from 2004 to 2008 (Figure 4). Profitability levels rebounded, balance sheets improved, further consolidation occurred, stock prices improved.

As we all know, this exuberance screeched to an abrupt halt at the end of 2008 as the financial crisis took hold in America — soon to be followed by world economies. Since that time, although we've recovered from the depths of 2009, steel industry profitability as a whole has not recovered to a sustainable level. For some companies, their

Figure 5
Global EBITDA margins have been declining since the middle of the last decade.



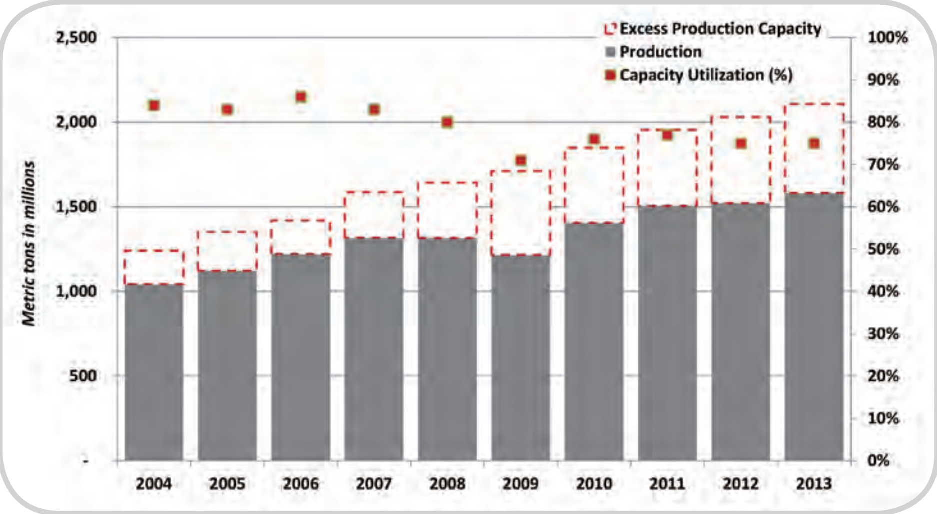



Figure 6
Global overcapacity.

margins are in fact at levels similar to those that drove bankruptcies during the early 2002–2003 timeframe.

## Global Margins

Declining margins have not only been a reality for U.S. steel companies. As you can see, global industry margins have also been steadily declining since the last decade (Figure 5).

Our domestic markets are certainly recovering, but there remain a number of market drivers that are creating a headwind to greater profitability — market fragmentation, continued global overcapacity, industry utilization rates and margin spread volatility.

## Global Overcapacity

Globally, steel production capacity has been growing exponentially in recent years — driven principally by China (Figure 6). Capacity growth has outpaced demand for many years. With the more recent deceleration of economic growth in China, and other world economic weakness, some 400 million tons or more of overcapacity exists. To put it in perspective, this overcapacity represents about four times the American industry's total production capability, and it will take some time to be absorbed.

## Imports

This obviously promotes an environment of import pressure for America — a specter that has been with us for some time.

Some steel products are impacted more than others, but historically, imports have structurally remained at around 23% of domestic consumption, and I would not expect a significant change going forward (Figure 7).

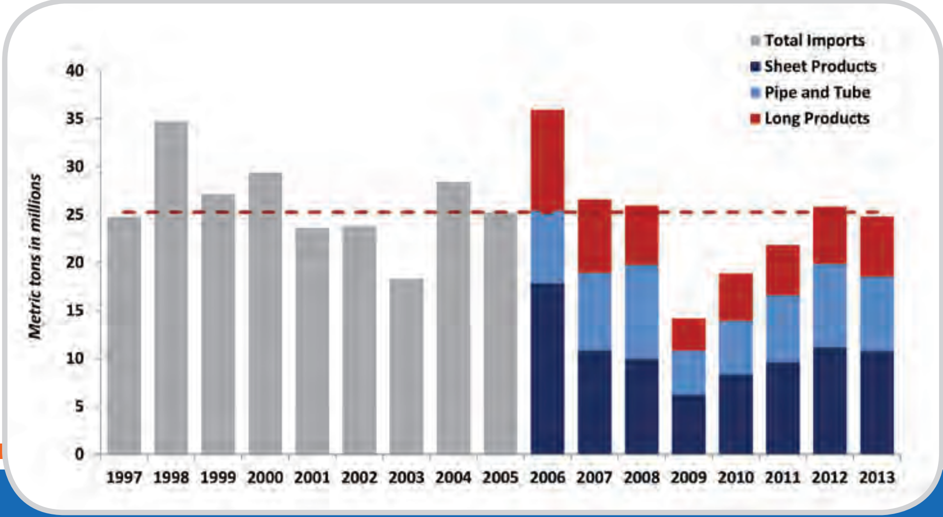



Figure 7
U.S. steel imports, excluding semi-finished products.

Figure 8
Reduced domestic utilization combined with reduced demand.

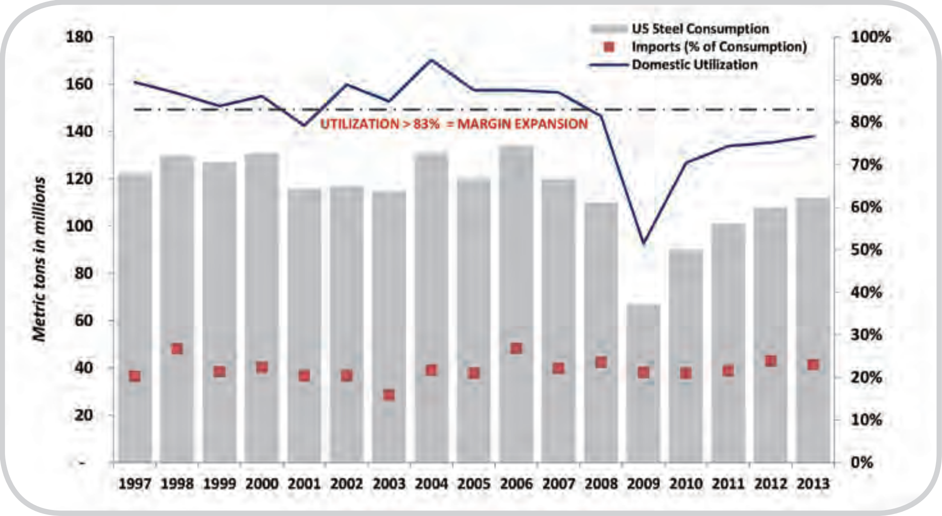
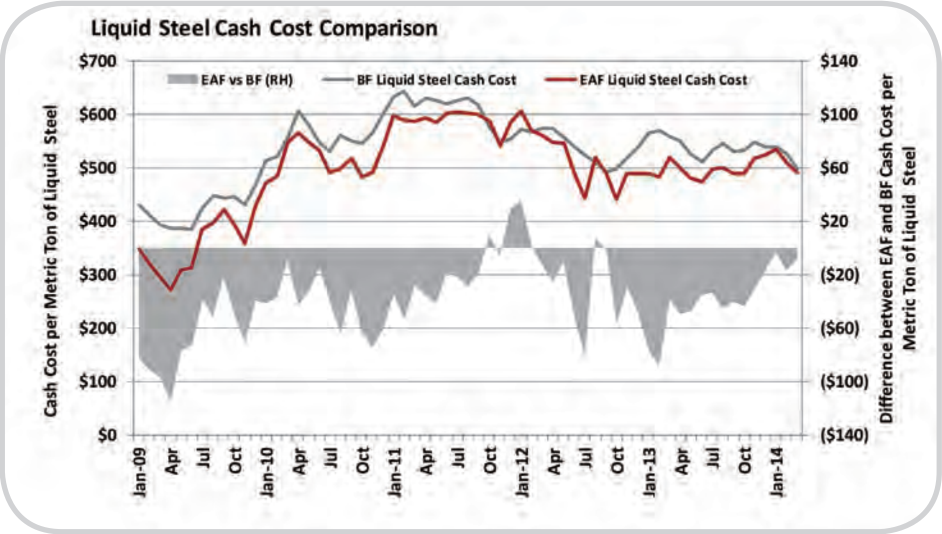



Figure 9
EAF vs. blast furnace raw material balance.




We seem to be in a cycle. Domestic steel prices rise, the spread to global pricing expands, imports spike and domestic pricing turns over. Not a dramatic change from the past, but a cycle that has become more frequent and will be a pricing headwind for the near future.

Although perhaps beyond our individual influence, we still compete against unfairly traded products facilitated by foreign subsidies, currency manipulation and unfair trade practices. The playing field should be level for all participants. The current and past administrations have been reluctant to take needed, timely action to ensure global competitors adhere to well-established trade laws. We all need to make our voices heard!

## Utilization

Imports are also inhibiting the expansion of domestic production utilization — which has recently been stalled around 76–78% (Figure 8).

Although improving, a much stronger residential and non-residential construction recovery is needed to drive utilization toward 85% — a level at which lead times start to "stretch out" and appreciable margin expansion occurs.

## EAF vs. BOF Cost Competitiveness

More recently, movements in certain raw material prices have reduced the competitive cost positions of the electric furnace producers relative to the integrated route. Blast furnace raw material

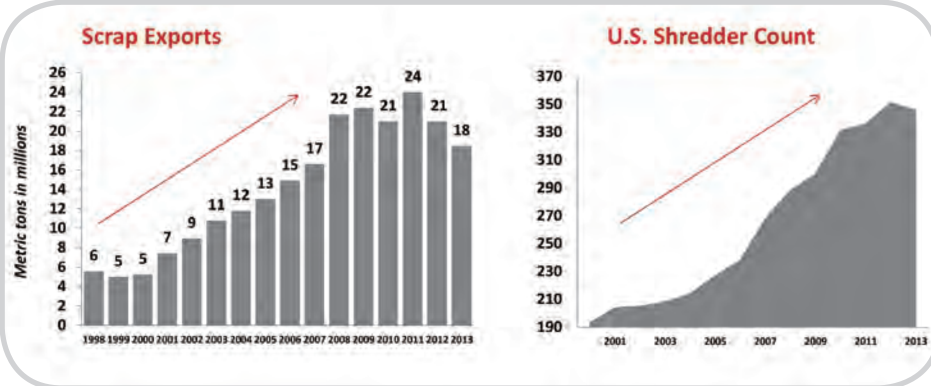



Figure 10
U.S. scrap market dynamics.

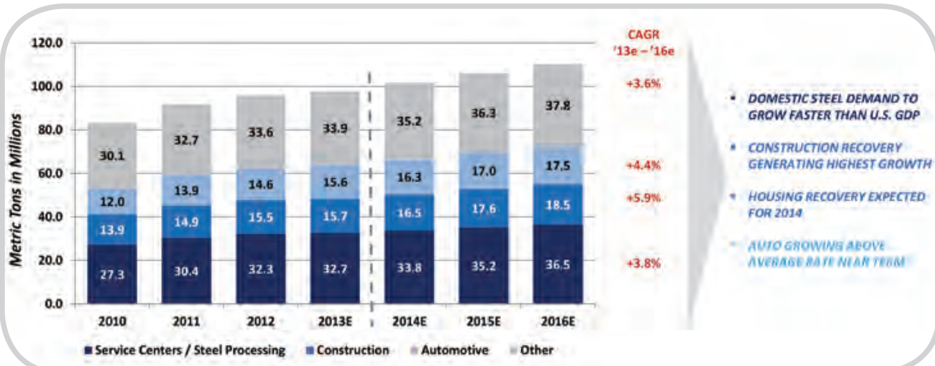



Figure 11
Steel demand positioning for growth: major U.S. end market steady growth.

costs — iron concentrate and coking coal — have decreased at a sharper rate than scrap, momentarily compressing the EAF advantage in hot metal cost (Figure 9). However, I believe this is short-lived because of an expected reduction in scrap prices over the longer term. The efficiency of the EAF producer's downstream operating costs for value-added products still remains significantly more competitive.

## Scrap Market

The metals recycling industry has been challenging. A prolific growth in U.S. shredder capacity competes with the export market for a limited reservoir of unprocessed, obsolete scrap (Figure 10).

This fierce competition drives up procurement costs and compresses profitability margin for recyclers. It is probable that, with time, there will be some rationalization in this industry because many of the smaller shredders currently lack sustainable cash flows. Also, a strengthening dollar will give resistance to the export market and, coupled with the introduction of forecasted DRI supply, scrap prices should experience downward pricing pressure. This will bring the historical correlation between scrap and iron ore back in line — re-establishing the strong hot metal cost advantage to the EAF producer.

So, there are plenty of challenges, but despite these headwinds, I am confident our industry is positioned for growth.

## Steel Demand

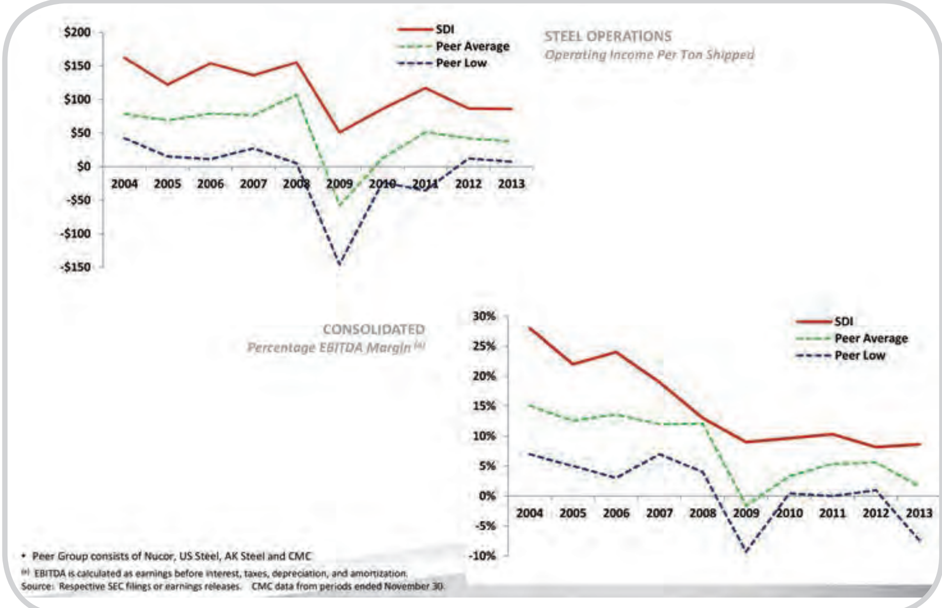
Fortunately, America is leading the world out of the financial doldrums, and our economy is recovering (Figure 11).

Presently, automotive is very strong and will be for some time to come. Manufacturing has regained strength.

Residential and non-residential construction is improving and is the key to driving industry utilization higher — to provide much-needed margin expansion.

Longer term, I believe our future has great opportunity.

Figure 12
Steel Dynamics Inc. culture differentiated: steel operations (left) and consolidated (right).




Non-service GDP is anticipated to grow at 5%, stronger than the 2.5–3% projected for the overall economy.

As economies improve, the cloud of uncertainty will lift and companies will put their considerable cash reserves to work, capitalizing on the low interest rate climate. This will drive fixed asset investment, which is a fundamental driver of the steel industry.

The shale gas phenomena will drive America toward energy independence — once again creating a robust economy that will expand steel demand as companies relocate and create new opportunities in the U.S., necessitating fixed asset investment, including the rebuilding of our nation's infrastructure.

The U.S. is the only mature economy that is actually "steel short" — meaning, when this growth occurs and steel is needed, we do not have enough domestic steel capacity to meet the need.

It's reasonable to expect production utilization to be higher in this environment. This will drive increased profit margins — great news for all of us in the long term.

However, we must remember, the steel industry is still — and will continue to be — cyclical. So how does a company navigate rough times?

When many of the mentioned challenges may be out of our direct control, what's left? When the playing field is much the same for all of us, why then is there such a disparity in financial performance between companies? What steps are needed for companies to "thrive?"

Well, one should not just manage to hope, but take destiny into your own hands!

## SDI Differentiated

Certainly, specific circumstances are different for each company, but I can speak for what has worked at Steel Dynamics.

I believe many of the things we do can be applied to many companies, in many industries — not just steel.

I tell our team that it's easy to make money and outperform our peers in the steel business — we just need to do three things right:

- First, average raw material input costs need to be lower than the competition's. The symbiotic relationship and strategic positioning between our steel and scrap operations helps accomplish this (Figure 12).
- Second, average selling prices for our products need to be higher than the competition's. Over the years, we have intentionally grown

- SAFE
- STRATEGIC
- ENTREPRENEURIAL & INNOVATIVE
- ADAPTIVE & RESPONSIVE
- PASSIONATE & LOYAL
- ETHICAL & SOCIALLY RESPONSIBLE
- PERFORMANCE-BASED COMPENSATION DRIVEN
- EMPLOYEE OWNERSHIP, EQUITY COMPENSATION

**Figure 13**
Steel Dynamics Inc. culture: ownership, accountability, purpose, impact.

a diverse portfolio of value-added products across different market sectors. We focus on creating value for our customers, developing market niche opportunities that insulate us from imports and exploring new markets. This has allowed us to sustain higher production utilization rates throughout market cycles, and generate greater profitability.

- And third — centric to all we do — and the key driver of our success, we must have the lowest cost operating culture. Having state-of-the-art facilities producing quality products is important.

But it's not technology alone that drives success — you need a passionate culture in which to exploit it. The right people in the right place will be your greatest asset. They are the backbone of a quality organization and are the force that creates and sustains value for the company, the customer and the shareholder alike.

A clear example is our purchase of the former Qualitec SBQ mill. We purchased the comparatively new mill out of insolvency for US$45 million. They had invested some US$400+ million in the facility. It had continually lost money and had never come close to reaching half of its designed capacity.

We had a team in place in six months, the mill became profitable shortly thereafter and has become one of the most efficient engineered bar mills' in the country. Same bricks and mortar… just different culture.

A passionate, safe culture in which each employee is invested with a sense of ownership, accountability, loyalty and purpose — with the ability to make contributions that have an impact. This is essential. Such a culture will drive efficiency, productivity and success.

I know — easily said!

You can read how to do it in myriad business books. *Good to Great* is an excellent one. Even *The Art of War,* in which Sun Tzu, a famous military tactician, describes his strategy to motivate his armies in 500 B.C. — is impactful. He knew how to motivate his men and build a conquering army, catering to their needs, sharing in the spoils of war — probably the earliest form of profit sharing!

There is nothing new to building a great team. Human needs and motivations have gone essentially unchanged for centuries.

It amazes me how so many companies still don't get it! Their prime focus is on the business, not on their people. People drive success. A passionate culture has the potential to provide the greatest financial return — and it is free — no CAPEX required.

But it does take quality time and attention of leadership, from the very top down, because the right culture does not just happen. Culture needs to be woven into the fabric of the company, and needs to be reinforced every day.

Figure 14
Open communication led to SDI's foray into the paint line business.

## Philosophy

Our philosophy is simple. But execution is critical, and is reliant on our leadership at all levels. They must appreciate it, breathe it and live it.

- Build a mutual respect and trust for each other, a respect and trust among employees, and between employees and management.
- Treat people fairly and equitably.
- Listen to them.
- Include them.
- Empower them.
- Minimize management and bureaucracy. Having layers of management suffocates clear communication, builds barriers and slows decision-making.
- Drive decision-making down to those who know what is really going on. It empowers the individual, evoking a sense of ownership and pride. While allowing autonomy, one must allow for mistakes while fostering accountability.
- Communicate.
- Share information openly. If they don't know the cost of specific materials or the relative profitability of the products, how can they make great decisions?
- Listen to their concerns and ideas, and respond quickly to them.

## Paint Line

Several years ago, the open employee dialogue born of building respect, listening and empowering led us into the paint business — one of our most profitable product lines.

An exit-end galvanizing line operator asked, "What happens to the steel we are consistently — month after month — shipping to two certain customers?" It initiated a trip — a very profitable trip to a certain toll coater!

Upon entering the parking lot of this company, I knew we would get into the business. I counted 83 cars in the parking lot — and that was just day shift. Incidentally, that company doesn't exist today.

## Drive Innovation — "Continually Challenge the Status Quo"

A perfect example is our diversification into rail. Dick Teets was the primary architect. We differentiated ourselves by producing 320-foot lengths, compared to 80-foot lengths produced by our domestic competition. We further weld these into 1,600-foot strings, creating great value for our customer. A further step was the innovation of new technology by one of our young engineers to produce head-hardened rail that will appreciably grow our market share (Figure 15).

Without the right culture, the creativity and ingenuity of an otherwise talented team cannot be harnessed.


Figure 15
Innovation: Premium, long rail.

## So, What Do We Do?

- We pledge a safe work environment and strive toward zero incidents — no accidents, no lost work days, no injuries.
- We expect superior performance, rather than being surprised by it. We strive for excellence in all we do. My personal preferred definition of a great leader is "one who leads others to places they would not otherwise go alone."
- It is amazing what can be accomplished by a team of positive, passionate people when the bar is set high enough.
- We reward people in lockstep with the prosperity of the company.
- Strong performance-driven incentives.
- Profit sharing/equity grants to build ownership.
- We care — compensation aside, you must show that you care for your people. It's essential to provide for their welfare and security. Often, it's the smallest detail that will turn an employee into your most faithful advocate or your eternal critic.

## Culture + Strategy = Prosperity

Some say "Culture eats strategy for lunch." Well, I'm not sure I totally agree, but I am sure of one thing: a healthy culture that creates a passionate team with an incredible esprit de corps, coupled with sound strategy, is invincible…and will drive prosperity for all.

Thank you. ✦