

# Your Partner in Steel Mill Services

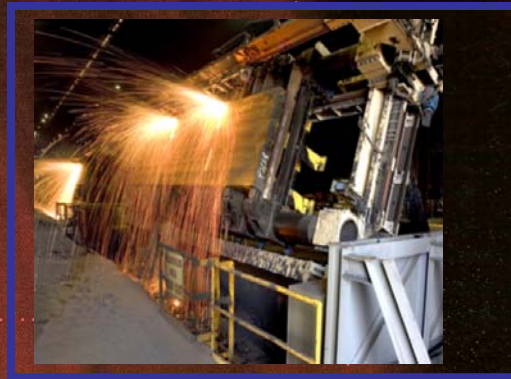
General Services

Slag Handling

Metal Recovery



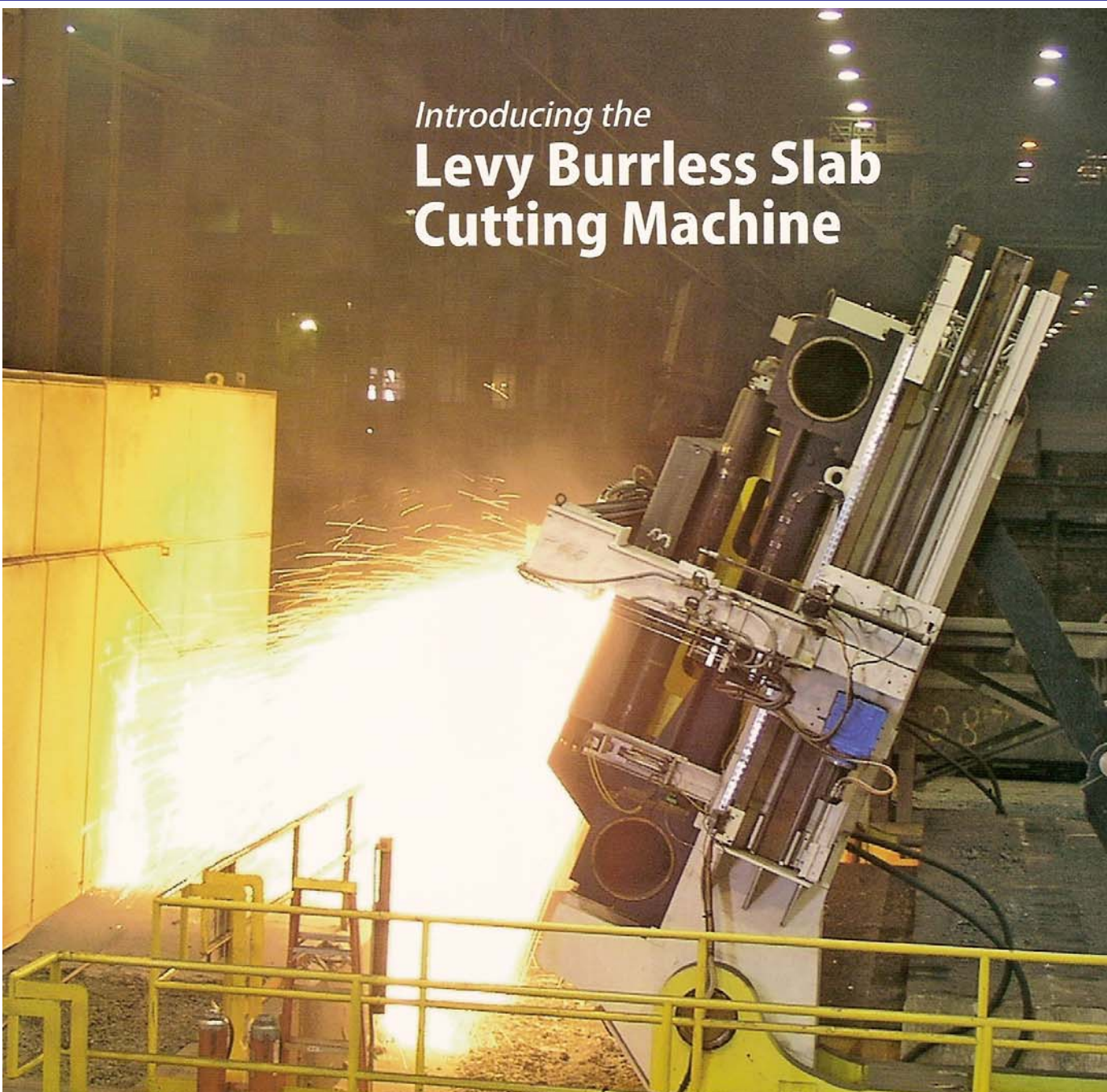
FROM START



TO FINISH

Prospectus:  
Automated  
Burrless Slab  
Cutting for Plate  
Mills

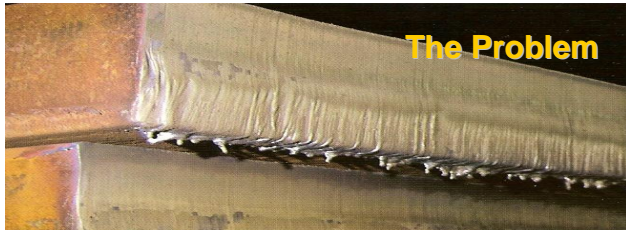




## Introducing the Levy Burrless Slab Cutting Machine

### Reduce Costs and Improve Yield with Levy's Burrless Slab Cutting Machine:

- Up to five "child" slabs can be cut in a single operation.
- One operator per shift can produce over 90,000 tons of finished product per month.
- Environmentally friendly and safer working conditions for the operator.
- It is impossible to cut a slab "off square". Gravity ensures that the slab rests in a parallel position as the torch tracks at 90 degrees.
- The PLC and computer controls monitor to an accuracy of 1/16th inch on cut pieces.
- The kerf width has been reduced to only 1/16th inch, significantly improving yield.
- Energy consumption is reduced. Automatic on/off torch controls eliminate gas and oxygen waste.
- Productivity monitoring, a vital tool to production management, is built into the system enabling continuous improvement programs to be implemented.
- Steel grades sensitive to thermal shock cracking can now be cut at significantly higher temperatures avoiding plate or strip edge cracks.



**The Problem**

Until now the process of burr removal has been a very expensive and time-consuming process. A consortium of companies working under the guidance of Levy, was brought together to build and construct what is now the most modern, reliable and innovative concept for cutting steel in the world. The Edw. C. Levy Company, a service provider to the steel industry for the past seventy years, and Donze, a Levy subsidiary specializing in gas and oxygen equipment, have developed the Burrless Slab Cutting Machine. A proprietary Levy process, the Burrless Slab Cutting Machine is revolutionizing how steel makers cut slabs.

**The Spider**

By cutting from the back of the slab to the front, a concept never previously imagined, the burr now forms on the upper face of the slab which in itself is a significant process change. As the burr was now clearly visible and easy to access, Donze engineers were able to engineer an ancillary piece of equipment to prevent burr formation in its entirety. This proprietary solution, named the spider, prevents burr formation and allows for simple inspection of the de-burred edge. The technology is less labor intensive

offering significant savings while providing greater accuracy with improved yield, and, above all, a burrless cut eliminating all secondary processes.

**Improved yield**

The table consists of four twin rolled chariots and two end roll chariots that can move along the length of the table. Between each twin rolled chariot, a Donze designed burning torch and nozzle traverse the width of the slab. The deburring bar, or spider, containing the proprietary deburring nozzles engages ensuring a burr-less cut across the entire slab face. The kerf width of the burning torch has been reduced to only 1/16<sup>th</sup> inch, significantly improving slab yield.

**Edw. C. Levy Co.**



The "Burrless Cutting System" produces a burrless, dimensionally accurate and perfectly cut slab at lower costs.



**The Solution**



**The Results**

The Edw. C. Levy Company and Donze, a Levy subsidiary specializing in gas and oxygen equipment, have developed the Burrless Slab Cutting Machine. The Burrless Slab Cutting Machine will revolutionize how steel makers cut steel slabs in the future.

Traditionally, manual steel cutting is labor intensive, environmentally hazardous and prohibitively expensive. In addition, cutting residue left behind in the form of burrs by current slab cutting processes cause downstream processing obstacles ranging from re-heat, furnace and roll damage, imperfections, rejects, and flume wash away blockage.



By using one operator for automated cutting and through eliminating burr removal labor and the pre-heating of certain steel grades, mills realize significant cost savings. In addition, improved yields and enhanced quality further benefit burrless cutting performance.

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# MITTAL

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46304

Ken,


Please use this letter of reference in your discussion with prospective new clients for the slab burning facility. The current facility at the 160" slab yard within the plate operations of Mittal USA Burns Harbor is running at 20 turns per week now and is producing 90% of our slab burning requirements to operate the 2 existing plate operations.

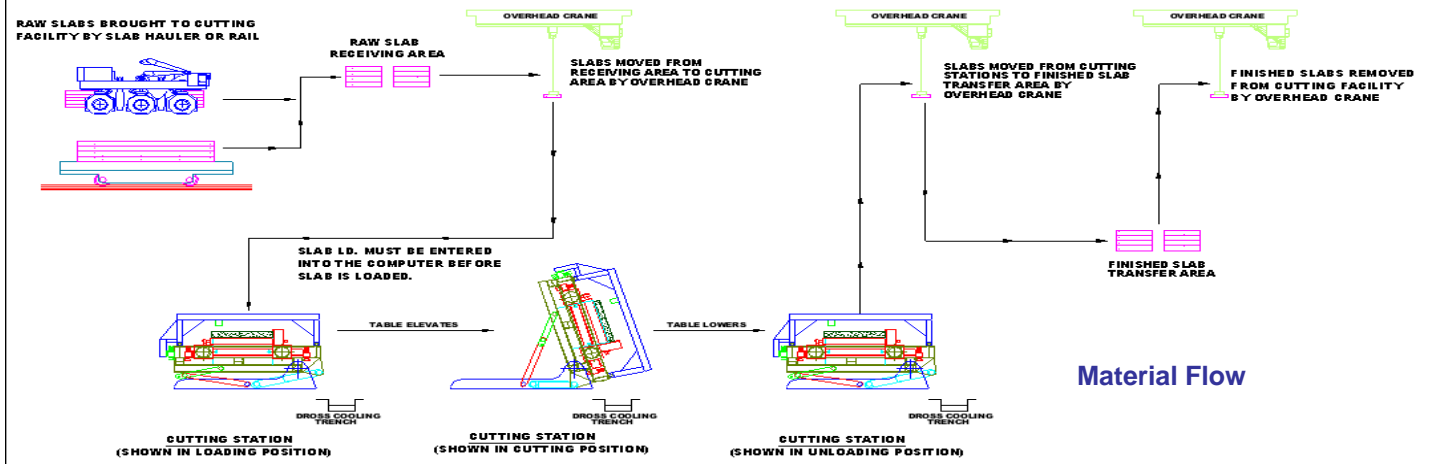
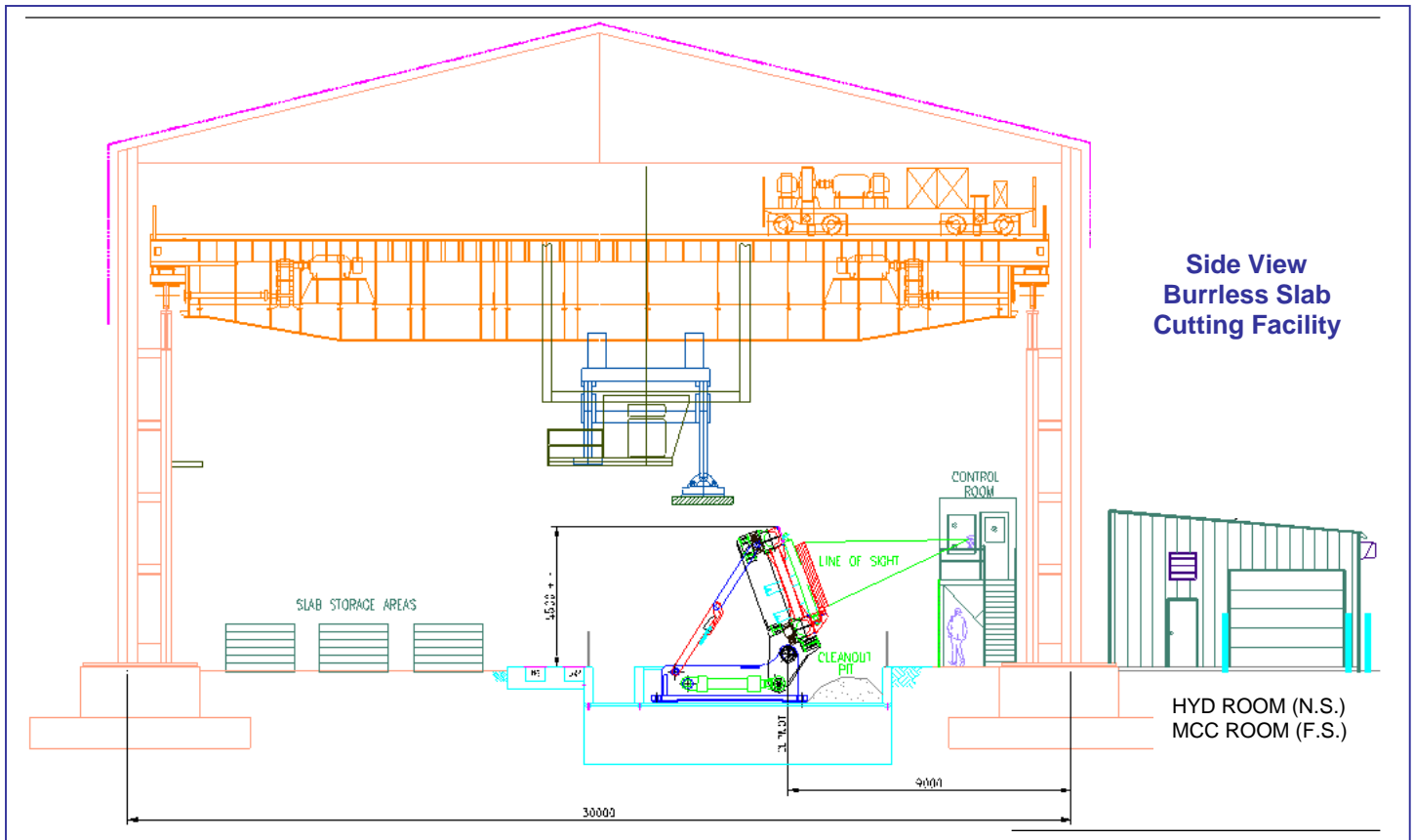
The quality of the burned edge along with the fact that all dross is removed at the time of burning has enabled us to curtail our regularly scheduled scarfing crew whose sole purpose for years has been to remove dross from manually burnt slabs. The cost savings of not scarfing and the added benefit of having slabs ready to charge immediately after burning has enabled the slab yard to support both of the plate mills with slabs on a much more timely basis and at a much lower cost per ton than our previous operations.

In addition, we have also seen a significant yield improvement from the smaller kerf width of your high-speed cutting level. We have been able to burn the higher alloy and carbon grades without pre-heating, thus eliminating the costly step in our pre-heaters. The burnt edge of these grades had the possibility of cracking from the amount of heat driven into the slab with our manual burn beds. However, with the dross removal torches and the higher-pressure vertical burning of the slabs, we have noticed a rapid reduction of heat in the face of the slab that we believe has for the most part eliminated end cracks. We now specify all of our critical grades for the slab burning facility, and in time with more advanced slab handling and sorting, we will increase our percentage of slabs for both mills to over 95% of total slabs charged in both plate mills at Burns Harbor.

Please, feel free to refer anyone interested in this type of revolutionary slab burning to me.

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## Edw. C. Levy Company

Headquartered in Detroit, Michigan the Edw. C. Levy Co. is a vertically integrated supplier of materials, construction and steel mill services with geographic diversification. Levy's international family of companies offer slag and steel mill services with operations in North America, Europe and Asia Pacific.

## Levy is a Leader in Flame Technologies

Levy / Mittal's burrless cutting facility produces over 90K tons of subdivided slabs each month.

Levy supplies slab conditioning services to Mittal Steel

and owns, operates and maintains a state of the art surface conditioning facility that recently conditioned its three millionth ton.

Levy through its subsidiary, Donze has developed a high speed cutting torch that cuts steel at 36" per minute on 8 3/4" thick steel on continuous casting machines (hot) and as high as 14" per minute on cold steel of the same thickness.

Levy has secured a contract with United States Steel to install fourteen burrless slab slitting machines designed to produce in excess of 200K tons per month. Operations to commence in 2006.