



GETTING ANSWERS FROM

OUR TEAM OF EXPERTS

Q: How does lime injection improve safety in a steel shop?

In my 27 years in steel, safety has always been a core value with a large focus on improving every year towards a goal of zero incidents. I have seen many improvements in both processes and equipment over the years to aid in safer working environments. One major benefit of injecting lime through a closed loop system is significantly reducing the lime dust around the work area. This provides a safer working environment in the steel shop.

Q: What are some of the cost savings associated with lime injection?

I have been a part of many cost savings projects and initiatives in my career. To remain competitive, companies will always need to look at ways to reduce costs. As a former buyer of raw materials, I was always looking for ways to reduce the material cost or the volume purchased. Some of my most rewarding projects were ones that provided more than one cost benefit. Lime injection is a great example. It helps reduce the amount of material actually purchased and used in the steel shop by eliminating lime waste through the bag house. Anytime you can lower the volume of a material used in every heat of steel, it will have a large impact on your spend.

In addition, melting smaller sized material can increase the melt time and provides an energy savings in the furnace. Due to the cost of energy in an EAF, this is something steelmakers are always looking to control. Injection allows for a more precise and controlled way to add lime to the heat. Proper lime dosing can also increase electrode and refractory life.

Q: How does lime injection help in reducing CO₂ emissions?

I think most everyone in the steel industry would agree that CO₂ emissions has become one of the largest focuses not just domestically, but globally as well. I have had many conversations with industry colleagues and attended several conferences over the last 24 months where the topic revolved around CO₂ emissions. Most steelmakers currently have goals and targets through 2050 to try and reach a carbon neutral footprint. This is another area where lime injection can help. The injection process gets more material into the bath. This process significantly reduces lime waste, which reduces overall lime consumption and helps lower CO₂ emissions.

Q: What is the impact on slag chemistry?

When I was very young in my career, I asked one of our most respected and knowledgeable melt shop managers, "how do you make good steel?" He responded by saying "if you want to make good quality steel, make good slag". That comment has stayed with me to this day. The proper addition of lime plays an integral role in the slag formation and foaminess. Lime injection is a much more accurate and controlled method of adding lime. Adding the right amount of lime at the right time can help improve overall slag chemistry.



MIKE SELLA

Director of Steel Strategy

Mike Sella is a seasoned steel industry expert with over 27 years of experience working in and analyzing the steel sector. He currently serves as the Director of Steel Strategy at Carmeuse Americas.

Do you have a question for Mike, or would you like to learn more about our lime injection solutions?

LET US KNOW YOUR QUESTION

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