

BOF Lance and Functions

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ABSTRACT

Oxygen lance is well known for work during blow, but after, during and before blow, this device, nowadays, do other important actions for many reasons as: burn bottom, slag splashing, blow mouth during blow heat. The present shows and discuss this other lance functions. It was made a comparison two BOF capacities: 220 and 330 t. Including in this comparison behaviors: scrap, skulls, bottom tuyere arrangements and how lances grow up your services during year with post combustion, slagplashing and bottom burned. It is proposed equations to control this new activity.

INTRODUCTION

The oxygen lance main function in the refining of steel in converters is the impurities elimination contained in the metallic charge by oxygen provision, and not relegating to a second plane the steel manufacturing processing time reduction, during the step of blow. The oxygen jet kinetic energy is transferred to the metallic bath creating the turbulence required to induce the refining reactions. Figure 1 shows the lance at the blowing moment.

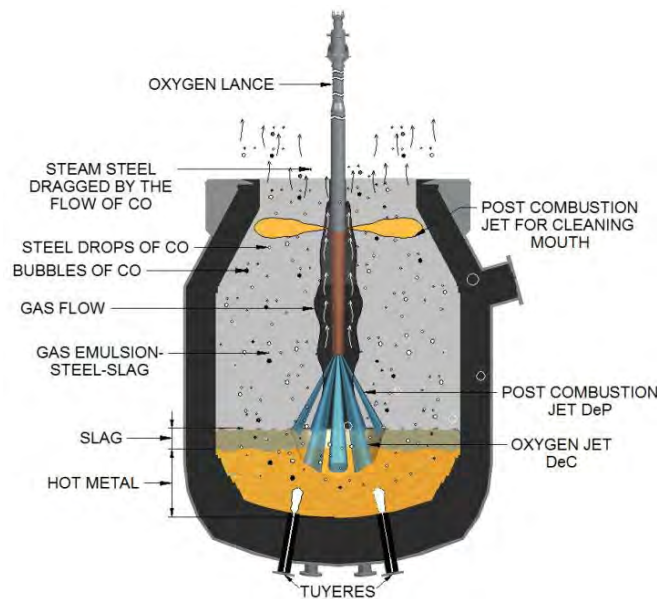


Figure 1. Blow representation.

However, although of the primordial and indispensable lance role in refining heats during blow, over the years, developments allowed to increase the equipment life and incorporated other functions the blow lances in events outside blow time and studies show the converter geometry and positioning relation of the lance on events before and after the blow. This article