

## **The practice of Carbon Injection and Post Combustion in order to achieve a metallic yield recovery in the Electric Arc Furnace: the experience of Amsteel Mills (Malaysia)**

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### INTRODUCTION

Amsteel Mills Sdn Bhd is a 800,000 metric tons capacity Steel Plant, located in Klang, Malaysia, and belonging to the Lion Group, which is operating four Steel plants, all in Malaysia, and is the first Steel producer in South East Asia with more than four million metric tons of flat and long products. Amsteel operates one scrap-based EAF of 87 metric tons heat size capacity, which has been equipped in the end of 2005 with a modern oxy-carbon injection system and an additional pc-burner system.

Besides the expected benefits coming from the reduction of power on time and overall energy consumption, Amsteel has experienced a constant and consistent metallic yield recovery through a very efficient carbon powder injection practice. This paper describes the results achieved over a year of production and the operational practices that take into account a very careful analysis of the EAF slag, monitoring its composition on the beginning and on the end of the flat bath period. The results in yield recovery are thus related to the reduction of the iron oxides in the slag and the amount of carbon powder used for the injection.