

January 9, 2026

Re: Electric Arc Furnace Practice

Nucor – Yamato Steel, Co. employs electric arc furnaces (EAF) to melt scrap steel into liquid steel for subsequent processing and refining. Roughly 90% - 95% scrap metal and 5% - 10% pig iron is charged into the EAF and melted using both electrical and chemical energy. Once the melted heat of steel becomes liquid and reaches the appropriate temperature and carbon levels required, it is poured into a ladle. The ladle is transferred to the ladle metallurgy furnace (LMF) where it is deoxidized (killed) and alloyed to meet the appropriate chemical requirements for the intended grade. The ladle is then transferred to a continuous casting machine where it is cast into the appropriate shape for the desired finished product.

We trust this information will answer your questions regarding electric arc furnaces. If we can be of any further assistance, please feel free to contact us.