POSTER EXPOSITION

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Development of formable steel grades through alternative steelmaking technologies

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ABSTRACT:
Environmental considerations mean alternatives to the traditional blast furnace/ basic oxygen furnace (BF/BOF) steelmaking route are being explored, such as electric arc furnace (EAF) steelmaking. An EAF operating using scrap as the feed material is less energy intensive and produces significantly less CO2 than the BF/BOF route. However, steel made in the EAF route typically has higher carbon and nitrogen levels. Interstitial free (IF) steel requires very low levels of carbon and nitrogen, making it a particular challenge for transitioning to EAF steelmaking. For this reason, the focus of my project is looking at ways to produce IF steel in an EAF. Experimental work so far in the project has aimed to investigate the impact of increasing carbon and nitrogen levels on the product performance of formable strip steels, initially by creating lab scale casts of IF steel with different nitrogen levels.

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