

AMD No. 4 Line

Hamilton, Ontario, Canada

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The project

The ArcelorMittal Dofasco (AMD) plant produces a wide range of steel products and is located on the Hamilton Harbour. A dual-pot conversion was required for their No. 4 line, which enabled the production of both Galvalume™ and Galvanized products.

The challenge

Constant communication and planning with the general contractor were essential because access to the work area was shared with other operations through a single doorway. Quick engineering changes were required to adapt to conditions discovered on site. Difficult subsurface conditions and 25m depth to rock required the micropile drilling methodology to be modified to reduce friction on casing caused by the wet clay layer.

The solution

A shotcrete and soil nail solution was used for this project because of its flexibility to deal with conditions on-site. A 3D model was created to identify all existing piles that could influence the drilling of soil nails, allowing Keller to identify problem areas and avoid any interferences with existing piles or utilities. The shotcrete allowed for the excavation to proceed immediately, providing a lower working elevation and more headroom for the micropile drill rig. The close proximity to the Hamilton Harbour required the excavation to proceed below the groundwater table.

Project facts

Owner(s)

ArcelorMittal Dofasco

Keller business unit(s)

Keller

Main contractor(s)

Triple Crown Enterprises Ltd.

Engineer(s)

JNE Consulting Ltd.

Solutions

Deep foundations

Markets

Industrial and manufacturing

Techniques

Micropiles

Soil nailing

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