Reliable Cooling for Continuous Casting from New Block Spray Nozzles

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Widnes, UK (PRWEB) October 24, 2008 -- To deliver significant improvements in cooling performance on continuous casting lines, spray technology specialist Delavan has introduced the Cool-Cast nozzle range. The Cool-Cast nozzle assemblies provide an even spray distribution for effective quenching and higher quality yield. The robust nozzles use a patented block body configuration and a precisely aligned spray tip to create and maintain the ideal nozzle alignment, despite harsh steel industry site conditions.

"Steel makers have two key needs," explained Delavan's Steve Swoope. "First, they need production continuity - the elimination of break outs and outages for plant servicing. Second, they need to maximise the premium product yield by the eradication of scrap and sub-standard output - improving the effectiveness of the secondary cooling addresses these requirements."

The two-fluid design Cool-Cast nozzle uses both air and water. The desired spray pattern is maintained at different flow rates by varying air pressure to give a good turn down ratio for the production of different grades of steel. The block design nozzle assembly permits parallel inlet connections without the requirement for elbows and allows for simple yet accurate installation. Blocks can be securely fixed to create a rigid assembly ensuring nozzles remain at optimum spacing and alignment to guarantee consistent cooling performance. The need for engineering maintenance on the cooling system is minimised by this reliable design.

Considerable research has been undertaken by Delavan on the internal geometry of the spray tip to produce a uniform spray pattern and distribution for optimum cooling performance. Initial users report that the advanced block design assembly achieves flow rates with much lower air consumption, saving energy by reducing loading on air compressors.

Cool-Cast nozzles are manufactured in stainless steel for extended service life. In the event of an internal blockage, the Cool-Cast block design nozzle has a removable liquid metering unit which can be taken from the assembly without any need to disconnect the nozzle from the header. Likewise, nozzle tips can be replaced individually in a matter of minutes.

Mating lugs on the nozzle tip and lance ensure perfect alignment, without the need for individual adjustment or use of a sealing medium. Maintenance requirements are therefore greatly simplified.

Major steel producers in the USA have already adopted the Delavan Cool-Cast system. These include Nucor Steel in Decatur, Arkansas, Ipsco in Mobile, and ArcelorMittal Riverdale in Cleveland.

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High/low resolution images are on the web at www.ainsmag.co.uk/de241/4605de1a.htm.

Notes
Delavan is a company within the Goodrich Corporation. Trade names are protected and defended in all countries where the company operates.

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