

Next Chapter Manufacturing successfully qualifies HTC-45 tool steel for superior thermal transfer and long tool life

Next Chapter Manufacturing, known for its ability to print true tool steels, expands its qualified materials with HTC-45, a high thermal conductivity steel

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/EINPresswire.com/ -- Next Chapter Manufacturing, known for its unique ability to print true tool steels, expands its qualified materials to include HTC-45 which is an optimized H-13 that eliminates common cracking with H-13 and has increased thermal conductivity that is twice that of Maraging Steel.

"The HTC-45 enables us to push the limits of additive manufactured molds and dies by providing longer wear tool life through better thermal transfer and faster cycle times for molders and die casters alike." said Jason Murphy, owner and CEO Next Chapter Manufacturing.



HTC-45 Core Insert With Conformal Cooling

Additive manufactured molds with conformal cooling channels have been used to enhance the cooling efficiency of plastic and die casting molds. H13 and maraging steel powders are commonly used in 3D printing, but each has its own problems.

H13 powder is difficult to build without cracking while the low thermal conductivity of maraging powder leads to higher thermal stress which promotes cracking from water cooling channels and heat checking on the design surface.

Tackling these problems, Daido Steel developed DAP®-AM HTC 40 and DAP®-AM HTC 45 by optimizing the chemical composition of H13. Paul Britton of International Mold Steel, the distributor of DAP®-AM HTC powders said "we are excited that Next Chapter Manufacturing has validated DAP®-AM HTC powders in their facility. They have delivered inserts for use in both



Next Chapter

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Paul Britton

plastic and die casting molds. Their expertise in AM printing combined with the unique characteristics of DAP®-AM HTC powders is a game changer for the mold making community. We recommend Next Chapter Manufacturing to anyone looking for a cutting-edge cooling solution."

International Mold Steel is a Daido Steel partner company that consults with Fortune 500 companies to deliver cutting-edge solutions in engineered tool and alloy steel in North America. The company was started in 1991 and is based in Hebron, Kentucky. For more information on our

products and services or to start a conversation, please call Doug Mitchell at 859-342-6000 or visit us at www.imsteel.com.

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