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Will heated blades revolutionize hockey?

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Tory Weber was a student in Calgary and working at a lumberyard when he ran out for his newspaper one February evening. He grabbed a warm pair of running shoes that had been sitting on the heat register next to the front door, stepped out onto his frost-covered front steps, promptly slipped and landed on his backside.

And just like that, Mr. Weber slid upon the idea that Wayne Gretzky believes will revolutionize hockey.

Yesterday at the Hockey Hall of Fame, about two decades after his inspirational slide, Mr. Weber officially unveiled Thermablades - heated skate blades that reduce friction and allow a hockey player to skate faster and with greater ease.

"Put an ice cube in your hand and the ice cube slides around in the palm of your hand," said Mr. Weber, explaining the science behind his invention. "It's the same principle with the skate blade. The heated blade creates a thin film of water between the ice and the blade and acts as a lubricant."

Mr. Weber's skate blade uses a battery to heat the steel to 5 C, just warm enough to reduce the friction between the blade and the ice. Research indicates that the reduction is significant - about 50 per cent of what it would be otherwise.

That kind of performance has attracted the interest of the National Hockey League. Within the next 10 days, several NHL players will begin testing the blades in practices and games. Kris King, the NHL's senior manager of hockey operations, said the NHL is "very interested" in confirming Thermablade's performance data. And he said the league wants to establish the safety and reliability of the blade in NHL game conditions.

The product is expected to become available to consumers by the middle of November, and possibly earlier, at \$399 a pair.

Mr. Weber already has a high-profile convert in Mr. Gretzky, the Phoenix Coyotes head coach. At the 2004 NHL all-star game in Minnesota, Mr. Weber delivered a prototype of the skate to Mr. Gretzky.

"I could immediately feel a difference in my skating," Mr. Gretzky said in a video presentation that was part of yesterday's product launch at the Hockey Hall of Fame. He liked the product so much he has bought into Therma Blade, Inc., the Verdun, Que.-based company that manufactures the product. He calls Thermablades "the most significant advance in skate blade design in at least 30 years."

The blades can be attached to a conventional pair of hockey skates. The charged battery in each blade will last for about two games. When touched for three seconds, sensors on either side of the rear of the plastic blade holder activate the battery to warm the blade. The system turns off when a player is idle on the bench, and the energy generated by returning to the ice reactivates it. The system is turned off by repeating the process used to turn it on.

Tests have shown that the blades reduce sliding friction by 50 to 55 per cent, cut vibration by 50 per cent and reduce effort by 10 per cent. Eighty-five per cent of players who used the blades over the summer said they were significantly smoother than conventional skates, while others said they skated farther with less effort, accelerated more quickly and felt less fatigue while playing.

Mr. Weber said he worked at two full-time jobs from 1985 to 2005 while trying to develop Thermablades, and admits he was rather naive. He had no business education. He tried to finance the development of the blade by inventing about 10 other products. Finally, friends told him to dump his day job.

"When Wayne came in, things changed for us," Mr. Weber said. "When you're just Joe Schmoe working in the lumberyard, no one picks up the phone."

While heated blades are creating a positive buzz in the hockey world, they don't bring the same sense of wonder to officials in other sports. Speed skating and sliding sports like bobsleigh and luge have banned the heating of blades to prevent competitors from gaining an advantage.

However, some people believe figure skaters will love the blades.

Michael Slipchuk, director of high performance for Skate Canada, says he has only just learned of the product, and doesn't know how the blade would perform under the stress of landings from jumps.

Fire on ice

A Calgary inventor has developed a heated skate blade that reduces friction with the ice. The Verdun, Quebec manufacturer claims the invention gives the user a quicker start, a smoother stride and the ability to make tighter turns.

The friction of a conventional blade against the ice creates a microscopic layer of water that acts as a

lubricant between ice and blade. Thermablade uses a small electric current to heat the blade, producing a thicker layer of water, which provides improved lubrication.

The lithium-poly rechargeable battery and electronics are encased within the heel of the blade holder for protection against moisture and impacts.

Copper-beryllium electrical contacts.

SOURCE: WWW.THERMABLADE.COM

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