



Innovative roller feeder from Timo Penttimies finalist for Swedish Steel Prize 2014

For having used high-strength steel in developing his durable and high performance TP-Roller for forest harvesting machines, Timo Penttimies is a finalist for the 2014 Swedish Steel Prize.

The Swedish Steel Prize is awarded annually by SSAB, the global leader in high-strength steel and wear plate, to recognize the most innovative design utilizing high-strength steel. Timo Penttimies, from Finland, is one of four finalists for this year's prize, which will be awarded during a ceremony on November 20 in Stockholm, Sweden.



"The TP-Roller design is a complete departure from other feeding rollers," said Timo Penttimies, developer of the TP-Roller. "The rollers are laser-cut discs made of high-strength steel, with relief holes and integrated sprocket teeth. They range from four to 11 discs per roller, depending on the width and use, and also have space for a cleaning device.

The TP-Roller offers a wide range of benefits. It grips well, even when the wood is hard, thick barked or has a lot of branches, which improves efficiency. The steep tooth angle, and especially the open roller structure, enables a low compression load on the roller, which decreases friction. This in turn saves fuel and is gentler on the harvester head.

The use of high-strength steel, in combination with an assembled honeycomb-like structure, provides excellent wear resistance in every direction. This enables the TP-Roller to come with a 4,000 operating-hour warranty.

"Experience so far strongly indicates that the service life of these rollers may extend even as far as 20,000 operating hours," explains Penttimies. "Competitors' rollers have a considerably shorter life span. They are usually made of mild steel, so they wear down quickly."

The Jury's motivation

The Swedish Steel Prize Jury's motivation for selecting Timo Penttimies as a finalist for the 2014 Swedish Steel Prize is:

"By using laser-cut Hardox plate, Timo Penttimies has succeeded in designing a completely new, innovative and cost-effective feeding roller for forest harvesters. The grip rollers are made of discs that are bolted together. Peripheral spikes around the discs minimize penetration into the logs, and secure the grip for maximum feed and reversibility, thus reducing damage to the logs while increasing productivity. The discs are mounted with sufficient space in-between for using a cleaning device that prevents clogging and make the rollers easy to maintain."

First awarded in 1999, the Swedish Steel Prize exists to inspire and increase knowledge surrounding the use of high-strength steel to develop lighter, safer and more sustainable products.

The winner of the Swedish Steel Prize will receive a stipend of SEK 100,000 and a trophy by Jörg Jeschke. The award ceremony is part of a three-day event at which approximately 600 international representatives from the global manufacturing and steel industry will participate in seminars and site visits at SSAB.

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SSAB is a Nordic and US-based steel company. SSAB offers value added products and services developed in close cooperation with its customers to create a stronger, lighter and more sustainable world. SSAB has employees in over 50 countries. SSAB has production facilities in Sweden, Finland and the US. SSAB is listed on the NASDAQ OMX Nordic Exchange in Stockholm and has a secondary listing on the NASDAQ OMX in Helsinki.

