

face**time**: TOM UHRIC, P.E.

# INNOVATIONS IN LEVELING

TOM UHRIC, P.E., product manager precision levelers, Herr-Voss Stamco, Callery, Pa., discusses developments in leveling technology

**MM:** Herr-Voss Stamco has been manufacturing precision levelers for more than 70 years. How do you know when it is time to develop a new technology?

**UHRIC:** True innovation is driven by the industry and the needs of the end user. Our product development group constantly is looking at ways to improve both products and processes to meet specific industry needs. Making changes to the design of a leveler or adding bells and whistles is beneficial only if it serves the industry by providing a solution to a specific end-user need.

Some manufacturers promote new leveling developments that have more to do with marketing than providing a solution to a specific industry need. One example is energy-saving designs. The reality is you don't get anything for free, and if less energy is being used, less energy is being put into the strip. Therefore less leveling is being achieved.

**MM:** Over the years, what type of design changes have you incorporated into your precision levelers that benefit the end user?

**UHRIC:** The key to corrective leveling is strength and rigidity. Because our wedge-type leveler design maximizes this when compared to hydraulic levelers, any change to the basic design made only for the sake of change would not provide a benefit to the end user and would not address any specific industry needs. That said,



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we are constantly looking for ways to better meet industry needs.

**MM:** What specific needs currently exist in the marketplace that may require design innovation within your product offering?

**UHRIC:** One of the largest needs facing the industry today is material that will remain flat after subsequent manufacturing processes, such as laser or plasma

cutting. Material that has only been corrective leveled may still have internal stresses that can be relieved during the process of laser cutting.

We have addressed this specific need with a new technology called ELT or Enhanced Leveling Technology. We developed this technology by drawing upon more than 70 years of leveling experience and more than 1,650 leveling system installations. Because this technology is an extension of our core competency and it addresses a specific need in the industry, we were confident in expending the resources required for its development.

Currently, there are three of these systems in operation, with a fourth on order. The interest level is growing rapidly due to the remarkable results that have been attained. Our customers are developing new opportunities by providing more consistent products more efficiently and affordably using this technology. The fundamental need for stay-flat sheet is met through a unique combination of leveling knowledge and control technology. A discrete sheet process technology allows great versatility in configuring a custom delivery system at lower investment levels than are traditionally available.

Also of importance is the need to level high-strength steels. This market is driven primarily by the need for car manufacturers to improve fuel efficiency by using lighter, stronger steels. Many of these steels exhibit high strain hardening characteristics. In other words, during plastic deformation and straining, the strength of these steels can increase significantly. Because of the inherent high strength of these steels, and their tendency to strain harden further, the forces and power required to level are much higher. Leveling these types of high-strength materials represents a significant engineering challenge, one that is perfectly suited for Herr-Voss Stamco. Our new generation of leveling systems in development will meet this industry need. These are the types of design changes that we consider true innovation. ■