News Release

Reports from the field: **Developing a hybrid screen solution to solve blinding problems.**

A quarry in western Wisconsin faced an all too common problem; they regularly ran silica sand with some clay and rock, which constantly caused blinding and plugging of their screening media. The plugging and blinding meant that operations had to shut down more often than normal for screen maintenance and cleaning — delays that also meant loss of production and revenue.

The producer originally used wire cloth with square openings purchased from Unified® Screening and Crushing. While



A hybrid screen production line at Unified

the screens delivered about 1,000 hours of wear life, the clay content of the material continued to blind-over the screen. They switched to a self-cleaning screen from a different manufacturer, only to see the wear life plunge to just 200 hours before failure.

Expertise in the field

The producer reviewed his contacts list and decided to call in Rod Skindrud, the Unified field representative in the region, for his professional evaluation. Before joining Unified, Rod was a quarry supervisor. Most Unified field reps have previous industry experience working for quarries, equipment suppliers, foundries or other aggregate/mining-related companies.

"It's a pre-requisite for the job," says Bob Kleason, Unified's Director of Marketing and



Rod Skindrud – Field Representative

Sales. "We don't just sell products. We solve customer problems. To be successful in our industry, nothing beats field experience. All Unified field reps know the various local materials, local processing conditions and other factors that affect wear life and throughput."

Rod visited the Wisconsin quarry and evaluated the materials and conditions. He asked the producer what specific problems they experienced. How effective were different types of screens when processing the materials that caused blinding? How much did each screening medium actually affect throughput before and after change-out?

Expertise in engineering

Rod then returned to Unified, discussed his field notes with the regional engineer and posed a challenge to the engineering team. Rod was thinking..." Could we provide the right screen or develop a new type of screen media to solve the problem?"



SuperFlow screen media – An advanced combination of wire and polyurethane strips

The mechanical engineers carefully

reviewed the field reports and test data. They knew that nobody knows a production problem better than the people on the jobsite.

"They take what was learned in the field," Bob Kleason says, "and check it against our large database of field reports. We update the database regularly to stay on top of ever-changing conditions and throughput." Bob added... "The work on a new screening medium combines all the field data with the engineering team's own deep knowledge of screening media and design".

Key insight: a better screen

The engineers realized that the key to processing wet, sticky material was to create a vibratory screen surface. They achieved this by re-designing a special hybrid of wire cloth and polyurethane support strips — a combination that lets each wire vibrate independently, eliminating wire-to-wire contact. As material falls on the screen, the wires vibrate at their own frequency. This allows material to slip through while maintaining accurate material sizing. Rod and the engineering team determined the right screen for the producer in western Wisconsin was a custom screen with a heavier wire construction. After more development and testing, the new hybrid screen was ready for the field. The team decided to call it SuperFlow.

Today, those screens run between 2,100 and 2,800 hours before change-out. By that time, more than a million tons of material has been processed across the screens. Customer inspection shows that... "The screens are not even broken, but we change them out as a preventative measure".

Inspired by the job

Since its introduction, the Unified SuperFlow screen has solved many customer application problems. Recent field tests, focusing on throughput performance and wear life indicated that the hybrid screen can improve throughput by as much as 30% across the board. Rod says.... "that's the kind of results Unified expects". "The difference is that our products are inspired by real-world jobsite situations," Rod says. "Some companies ship whatever screens they have in stock. We engineer and manufacture screens to process specific materials under actual field conditions."

Rod explains, "We has the advantage of manufacturing a wide range of screening products; wire, polyurethane, rubber and even provide manganese and chrome crusher wear parts. This gives the Field Reps and engineers a big product tool-kit to work with".

"Sometimes all we have to do is tweak an existing product," he says. "Other times, we'll develop a whole new product. . . It's that broad capability to engineer and manufacture whatever fits the job - that makes us successful."

Manufacturing and designing screen media since 1968

Unified Screening & Crushing has been designing and manufacturing screening media for more than 40 years. During that time, Unified has grown to 16 companies within continental US, offering screening media, wear parts, accessories and the largest inventory of ready-to-ship manganese and chrome crusher parts in North America.

Questions relating to this report or any Unified product design or product manufacturing, please call **866-968-3697** or e-mail to **info@unifiedscreening.com**.

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