

Coil Scale Ingenuity

Steel manufacturer's custom coil scale increases efficiency and safety, and reduces costly repairs and downtime

Regardless of the industry, having the right tool for the right job is essential. An Illinois steel company discovered this when they tried to adapt a floor scale to weigh 60,000-pound coils. Constant breakdowns required emergency repair and regular load cell replacement, which caused costly work stoppages. Even when the scale was functional, it was a production bottleneck. The number of coils finished per day has an inverse correlation with the time taken to weigh the coil—as the time decreases, the quantity of coils increases and vice versa.

One day, both the floor scale and the plant manager reached their breaking point. The manager called Kurt Hebenstreit at Champion Scale to ask for a long-term solution. The St. Louis scale shop visited the facility and assessed the challenge. Currently, a crane was lifting the coil onto the scale, which gave Kurt an idea. If he could automate the transport of coils across the scale, it would drastically increase efficiency. The scale would need to be rugged enough to handle the heavy coils and user-friendly to streamline the weighing process.

What Kurt needed was a miniature railroad scale built flush with the production floor, and a corresponding miniature railroad car to carry the coil as it crossed the scale. This option would reduce scale damage; forklifts could safely drive over the scale instead of trying to navigate around an above ground option. Safety would also be increased by reducing tripping hazards. The only problem was such a scale didn't exist. It would need to be custom built, and Kurt needed a company to work with him cost effectively on the design.

He called Rice Lake.

Kurt worked with a technical sales engineer who quickly provided a quote and drawings of a modified RoughDeck® floor scale. The plan was approved by the end-user, who was eager to reap the rewards of updated technology built to suit his unique requirements.

Five years later, the RoughDeck CS is performing better than expected. With only routine maintenance, the work stoppages due to emergency repairs have been eliminated. In fact, the scale is still operating on its original load cells, which are mounted outside of the rail to reduce the strain of scale movement as the coil car crosses.

The time to produce a coil has been reduced from an estimated 25 minutes to 15 minutes due to the automated coil transportation. Instead of using a crane, now when a coil is ready to be weighed, the operator simply presses a button to lower it onto the coil car. The car moves across the RoughDeck CS, stopping for a quick weighment before continuing on its tracks to a holding area. The car then returns to its home base beneath the next coil, which is now ready to be wound.

The increase in production and reduction of repair has helped the scale pay for itself. Having the right scale for the right job is integral—even if the scale hasn't been invented yet. ■

What Kurt needed was a miniature railroad scale built flush with the production floor, and to fit with the existing miniature railroad car to carry the coil as it crossed the scale.



Once this 60,000-pound steel coil is wound, the railroad car lifts it off the cylinder and travels across the RoughDeck CS. All aboard!