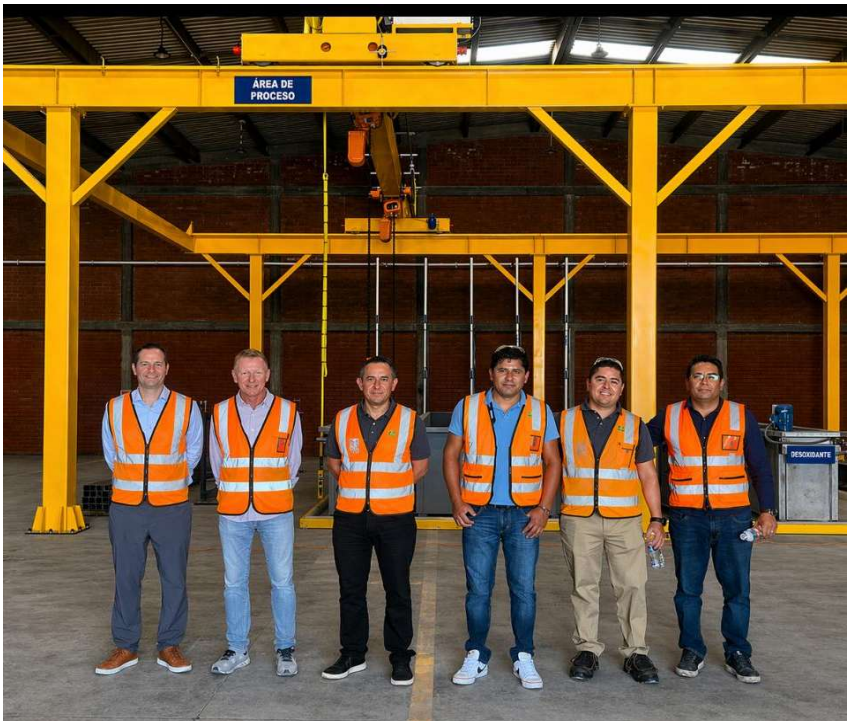
STRONG SUPPLY CHAIN

RUST REMOVAL FOR STEEL TUBES



From left to right: **Scott W. (John Deere), Jörn Schröttle, Fernando P. (John Deere), Ivan Solis, Carlos B. (John Deere), Pablo Pasten.** Visit at QSD Plant 2 to see advances of ramp up.

QSD OPENS NEW CHEMICAL SURFACE CLEANING FACILITY TO SUPPORT JOHN DEERE OPTIMIZE THEIR SUPPLY CHAIN

John Deere, the world's leading manufacturer of agricultural machinery, was looking for a reliable partner to support them in an important improvement project, optimizing their current supply chain for their steel tubes to generate significant time and cost savings.

The company was seeking a local partner with the right know-how, production capacity and that can also meet the very high quality, safety and environmental standards John Deere requires.

QSD needed to find the means not only to clean the rusty surface of the steel tubes, but also to prevent the tubes from rusting again between storage and further processing due to the climatic conditions in Ramos Arizpe, Coahuila.

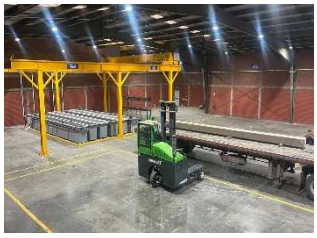
SOLUTION

QSD performed some surface cleaning and quality trials using different combinations of chemicals to ensure the elimination of all rust inside and outside of the steel tubes. Therefore, we had to first remove any grease layer from the surface to successfully remove all the rust and second to configurate the process steps effectively to prevent the tubes from rusting again.

Chemical derusting works through a chemical reaction, breaking down the rust into a water-soluble metal salt. This soluble salt is then rinsed off from the surface, leaving a clean base metal.

The main challenge for QSD was to develop a standardized and high-quality process to meet the planned production volume of over 30,000 Tubes/year and to safely operate the tubes measuring up to 8 meters in length and 250 kg in weight each during the process.

Within 9 months of hard work, QSD has established a completely new facility in Saltillo, Coahuila. The designed cascade method for the surface cleaning enables us to efficiently clean parts with dimension up to 8.5m in length, 0.8m in high and 0.5m in wide. Additionally, the process can be extended to increase the current capacity or to introduce other dimensions.



RESULTS

The feedback is that QSD successfully met the expectation of John Deere in all aspects. The new chemical surface cleaning facility is currently ramping up to reach full production in July 2026. The great synergy and teamwork between John Deere and QSD led to a commitment for a multi-year partnership between the two companies.

COMMITMENT TO SAFETY

QSD recorded zero safety violations during this project.