

ERW Tube Mill Installs In-line Automatic Magnetic Separator Increases Productivity & Reduces Total Operating Costs

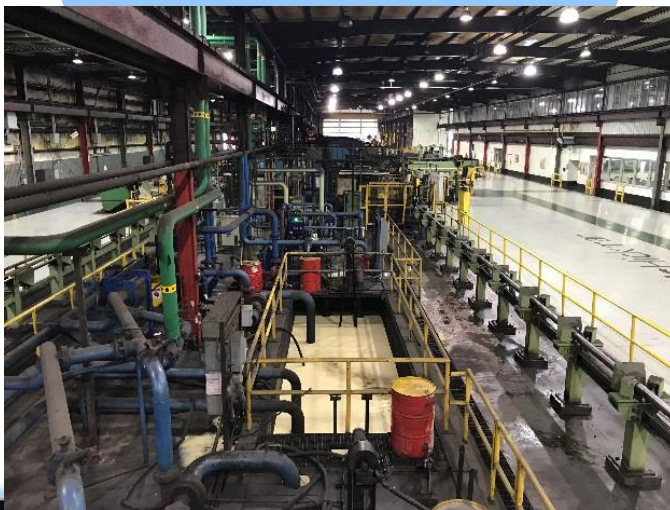
The Most Advanced, Automatic,
Non-Disposable Liquid Filtration System



Steel Mill/Tube



ZGF Maggie MG1200, 2-Station with Smart Drum PLUS rated at 250 gpm



Fines and Scale Captured by Maggie and Removed by the Smart Drum PLUS

Customer Challenge

As the tube is formed, small metal fines and slivers are generated on a continuous basis. If not effectively and efficiently removed from the mill coolant, these metallic contaminants will negatively impact the process. Most mills utilize settling zones to drop fines from the mill coolant and discourage the fines from re-entering the process. Settling zones do not remove the contaminants from the process, they just defer the problem. Secondary filtration, such as bags, is often added to address the smaller fines. Neither of the commonly employed methods do a good job of removing the contaminants from the process. If the contaminants (i.e. metal fines) are not effectively removed from the process, the total operating cost of the process will be excessive. Poor contaminant control results in higher operating costs and diminished production capability due to shorter impeder life, roller life, and mill coolant life, as well as excessive machine component wear, increased maintenance, and excessive waste disposal.

ZGF Solution

ZGF installed a Maggie MG1200, 2-Station automatic, in-line magnetic separator with a Smart Drum PLUS fluid recovery system. The system has a design capacity of 250 gpm. The Maggie system is installed in an existing circulation loop directly in-line to the impeder to provide the cleanest possible coolant at the most critical point in the ERW tube manufacturing process.

Results

- Increased productivity and reduced total operating costs by extending impeder life
- Reduced burden on maintenance staff
- Based upon total value that ZGF Maggie technology has provided, the mill has subsequently installed Maggie technology on two additional lines.

Reduced the particulate contamination by up to 95%