

Rollig Mill Quality Control Laboratory

The inspection, testing, and measurement devices in the Diler Iron and Steel Rolling Mill Quality Control Laboratory include:

- Universal Tensile Testing Machine (Dartec 750kN)
- Universal Tensile Testing Machine (Instron 1500kN)
- Geometric Measurement Device (ECM)
- Bend-Rebend Machine (GöçMakSan BS60)

Tests performed in the Rolling Mill Quality Control Laboratory:

- Unit Weight Measurement
- Tensile Test
- Bending and Re-bending Test
- Surface Geometry Measurement

Steel Mill Quality Control Laboratory

The inspection, testing, and measurement equipment used in the Steel Plant Quality Control Laboratory at Diler Iron and Steel includes:

- ARL iSPARK 8860+ (Optical Emission Spectrometer)
- ARL 4460 (Optical Emission Spectrometer)
- ARL 3460 (Optical Emission Spectrometer)
- ARL OPTIM'X (XRF Spectrometer)
- LECO TCH600 (Nitrogen, Hydrogen & Oxygen Analyzer)
- LECO CS844 (Carbon & Sulfur Analyzer)
- Sample Preparation Equipment



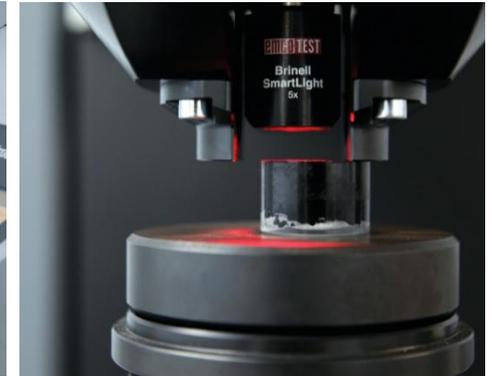
Tests conducted in the steel mill quality control laboratory:

- Complete Chemical Analysis of Ferrous Alloys
- Refractory Materials
- Aluminum
- Ferro Alloys (FeSi, FeSiMn, FeCr, FeP, FeB, FeV, FeNb, FeMn, FeTi, FeMo)
- Fluorspar
- Carbon Additive Materials (Anthracite)
- Calcium-Containing Cored Wires
- Bauxite
- Pig Iron
- Lime

Wire Rod Rolling Mill Metallography and Mecahanical Test Laboratories

Inspection, Testing and Measurement Equipment in the Metallography and Mechanical Laboratory of Diler Iron & Steel Wire Rod Rolling Mill:

- Tensile Test Device
- Rib Projection Device
- Coil Specimen Straightening Machine
- Specimen Marking Device
- Bend and Rebend Test Machine
- Upset Test Device
- Abrasive Cutting Machine (3x)
- Resistivity Measuring Device
- Rockwell Hardness Measurement Device
- Universal Hardness Measurement Device
- Micro Vickers Hardness Measurement Device
- Optical Microscope
- Stereo Microscope
- Automatic Grinding and Polishing Device
- Manuel Grinding and Polishing Device
- Hot Mounting Press (2x)
- Drying Oven
- Muffle Oven



Types of tests conducted in the Wire Rod Rolling Mill Metallography and Mechanical Laboratories:

- Measurement of mechanical properties (yield & Tensile strenght, % elongation and % Agt)
- Determination of rib geometry
- Upset test according to EN 10263-1 standard for surface inspection
- Bending and rebending tests for surface control
- Electrical resistance and resistivity test
- Hardness measurements
- Determination of % scale amount
- Microstructure analysis
- Determination of decarburization depth
- Micro cleaning
- Grain size
- Austeninte grain size
- Determination of spheroidization rate
- Failure analysis
- Determination of grain boundaries cementite
- Specimen surface controls
- Segregation test
- Center hardenability test

