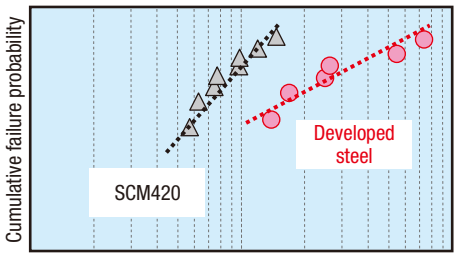
Bar & Wire Rod

JFE Steel is creating new steels for various components which meet our customer's needs for their forming and heat treatment processes.

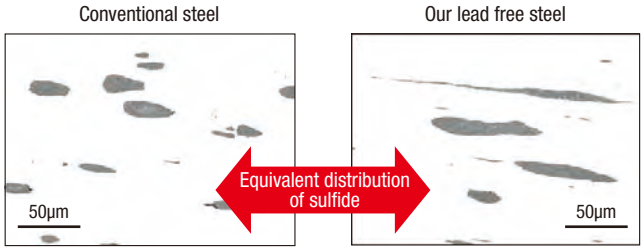
Technology for the Advancement of Case Hardening Steel

Case hardening steel is mostly used for gears which are needed for excellent fatigue properties. In order to achieve excellent fatigue properties, we investigate integration of technologies such as alloy design oriented for grain refining and suppression of microstructural deterioration in conjunction with shot-peening.



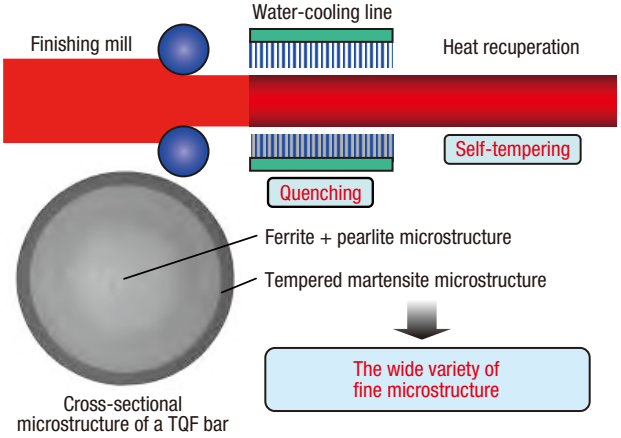
Technology for Evolution of Lead Free Steels with High Machinability

Lead has long been the essential element for steels to achieve high machinability, which is known to be highly harmful to the environment. Our technology for control of sulfide morphology has cleared the path for lead free steels with high machinability.



On-line Heat Treatment Technology

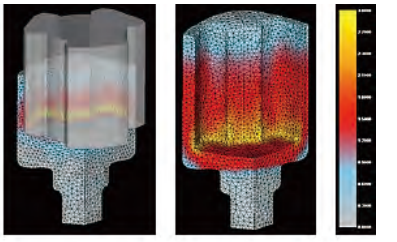
Thermal control is one of the most powerful technology that strengthens steels through refining microstructure. Our TQF is the only 1 thermal control process of bars which is equipped with water-cooling line in the end of mills in which rolled steel is quenched and then self-tempered.



Forging Evaluation and CAE Simulation Technology

Prediction of forgeability and processing evaluation have been enabled by combination of forging trial by press machine and CAE heat or plastic deformation analysis. These technologies contribute optimization of customer's production process.

300t press machine



Analysis for Parts
- Prediction of crack initiation position during forging
- Prediction of forging load