



Tubular Products & Casting

The research and development for advanced tubular products and those technologies are focused on oil country tubular goods (OCTGs), linepipes, tubes for automotive applications and etc., promptly responding customer's demands for the environmental requirements and higher functionalities.

OCTGs & Linepipes

The drilling environments for oil and natural gas have become deeper and severer in recent years, and materials are now required to meet extremely strict requirements. To satisfy the growing need for tubular products with high corrosion resistance, we are developing new stainless steel OCTG and linepipe products, contributing to the development of oil and natural gas resources worldwide.



Offshore oil field using Cr bearing OCTG



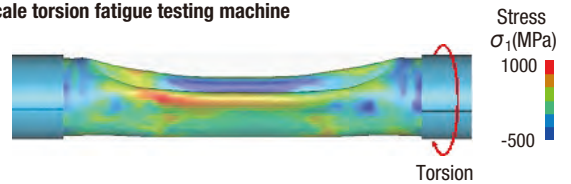
Laying 13Cr linepipe

Steel Pipes for Automotive Applications & Secondary Formability Evaluation Technologies

Together with the development of steel pipes for automotive applications, such as JFE's HISTORY™ pipe and high strength ERW pipes, which feature outstanding formability and fatigue resistance characteristics, we are also developing forming technologies for efficient production of actual parts from these pipes and tubes, as well as numerical analysis technologies.



Large scale torsion fatigue testing machine



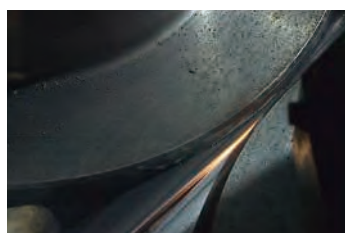
Finite element analysis of torsional deformation of steel pipe

High Reliability Process Technologies for Steel Pipe

JFE Steel has gained the trust of customers by developing leading edge process technologies such as high reliability welding technologies for high frequency electric resistance welding (HFW) steel pipes, high dimensional accuracy forming technologies for seamless steel pipes and material quality control utilizing pipe making processes.



Seamless steel pipe piercing experiment (for OCTG/linepipe)



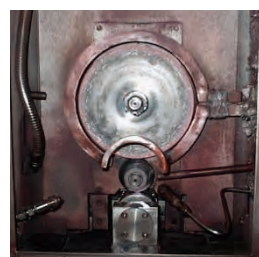
HFW welding experiment

Material Design & Manufacturing Technologies for Cast Rolls

Accompanying the trend toward higher grade and higher quality in rolled steel products, the properties and quality required in rolls for hot rolling are becoming even stricter. JFE Steel has developed centrifugally cast high speed steel (HSS) rolls with excellent wear resistance and surface deterioration resistance, thereby contributing to progress in rolling technologies.



Centrifugally cast HSS roll



Hot wear simulator