



# Stainless Steel

Our pursuit for the ultimate potential of ferritic stainless steels leads to realization of the world highest properties amongst entire stainless steels as well as highly efficient production processes.

## Heat Resistance Technology

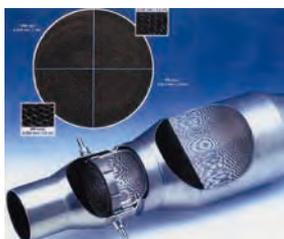
Automobile engine temperature has increased in order to improve environment and energy performance. Motorcycle disk brakes require even higher heat resistance. JFE Steel has developed heat resistant stainless steels for exhaust manifolds, automobile catalyst carriers, heat resistant disk brakes, etc.



Automobile exhaust manifold made from JFE-TF1



Disk brake made from JFE410DB



Automotive catalyst carrier made from JFE20-5USR

## Improvement of Corrosion Resistance & Evaluation Technology

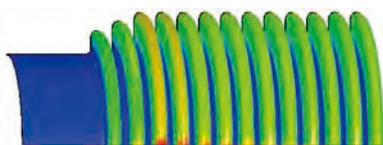
JFE Steel has developed high corrosion resistant ferritic stainless steels by technologies for manufacturing extra low carbon and high Cr steels. Ni/Mo free JFE443CT has the same level of corrosion resistance as SUS304, JFE30-2 is suitable for the roofs of buildings in coastal areas. Based on its outstanding corrosion evaluation techniques, including field exposure and accelerated corrosion tests, JFE Steel proposes the optimum stainless steel products for customers.



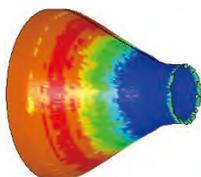
Example of application of JFE30-2 to roof (Kansai International Airport Terminal Building)

## High Formability Technology Material Design Technology

JFE Steel assists customers in solving forming problems by developing various types of ferritic stainless steels with high elongation and  $r$ -values by using high purification and hot rolling technologies. JFE Steel also proposes the optimum forming method utilizing CAE technology that accurately incorporates material properties.



Forming simulation of flexible tube



Forming analysis of Spinning

## High Productivity Technology

JFE Steel supplies stainless steel products with outstanding cost performance to customers by developing "Only One / Number One" technologies, as exemplified by JFE's unique Cr ore smelting reduction steelmaking process, high purity refining technology and the tandem mill-CAL-inline pickling process, in which a high efficiency carbon steel production line is used to manufacture stainless steel. JFE443CT is a JFE "No. 1" product which has received the Nikkei Superior Products and Services Awards Nikkei Business Daily Awards for Excellence and the Ichimura Award for Industry Meritorious Achievement Award, and can also be mass-produced by employing this high productivity technology. JFE443CT is increasingly used in many applications where the conventional SUS304 had been used.



Example of JFE443CT produced by tandem mill and CAL process (barbecue grill)