

# FOREWORD

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The functions required to automobiles in recent years have become increasingly diverse and advanced. In addition to the essential requirements, the industry requires

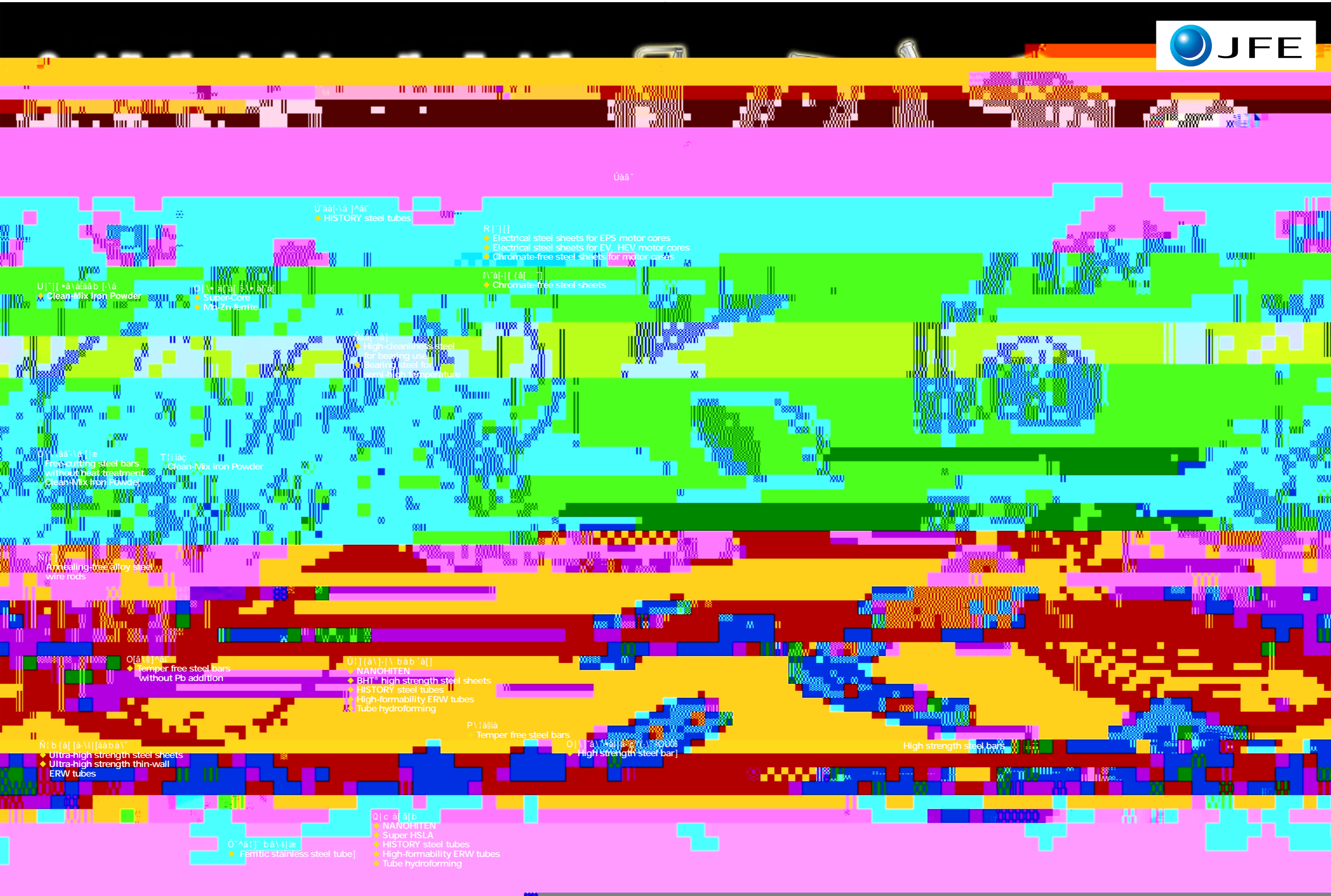
industry as it attempts to satisfy these requirements are auto body weight reduction, improved crashworthiness, and longer product life. Moreover, achieving stronger competitiveness by shortening the new model development cycle is also an important task.

Traditionally, the steelmaker's role was to develop and propose new products which met the automaker's needs. In contrast to this conventional relationship, JFE Steel has not only strengthened its new product development system for all steel products, but also created an application technology development system in order to respond to the new requirements mentioned above.

To contribute to efficient development of higher performance automobiles, JFE Steel is extending the scope of its activities to new stages by implementing EVI (early vendor involvement) activities, in which the company participates from the initial stage of new model development and actively develops and proposes parts for automaking in line with the concept of the new model. These activities are not only limited to materials, but also include processing methods and performance evaluation.

JFE Technical Report No. 2, "Special Issue on JFE Steel," gave an overview of JFE Steel's automotive products and technologies. The current No. 4, "Special Issue on Materials and Application Technologies for Automotive Use," presents detailed discussions of JFE Steel's distinctive EVI technologies which are contributing to world-leading automaking, as well as JFE Steel's Only 1 and No. 1 product line as a basis of its EVI technologies. First, this special issue takes up application and evaluation technologies for steel products which contribute to weight reduction, improved crashworthiness, and shortening of the development cycle, and also corrosion prevention/evaluation technologies for automotive steel products, which governs the life of the auto body. This is followed by an introduction to





U'aa[-\a ]^ar  
 ◆ HISTORY steel tubes

R'[]  
 ◆ Electrical steel sheets for EPS motor cores  
 ◆ Electrical steel sheets for EV, HEV motor cores  
 ◆ Chromate-free steel sheets for motor cases

U'[] [-\a ]^aa b [-\a ]  
 ◆ Clean-Mix Iron Powder

O'[] [-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ Super-Core  
 ◆ Mn-Zn ferrite

O'[-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ Chromate-free steel sheets

aa[-\a ]  
 ◆ High-cleanliness steel for bearing use  
 ◆ Bearing steel for semi-high temperature

O'[] [-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 Free-cutting steel bars without heat treatment  
 Clean-Mix Iron Powder

T'[]^aa  
 Clean-Mix Iron Powder

N'[]  
 Annealing-free alloy steel wire rods

O'[-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ Temper free steel bars without Pb addition

U'[] [-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ NANOHITEN  
 ◆ BHT high strength steel sheets  
 ◆ HISTORY steel tubes  
 ◆ High-formability ERW tubes  
 ◆ Tube hydroforming

P'[]^aa  
 Temper free steel bars

O'[] [-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 High Strength Steel bar

High strength steel bars

N'[] b [-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ Ultra-high strength steel sheets  
 ◆ Ultra-high strength thin-wall ERW tubes

O'[-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ Ferritic stainless steel tube

O'[] c [-\a ]^a [-\a ]^a [-\a ]^a [-\a ]^a  
 ◆ NANOHITEN  
 ◆ Super HSLA  
 ◆ HISTORY steel tubes  
 ◆ High-formability ERW tubes  
 ◆ Tube hydroforming