

FOREWORD

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Member of the Board and Executive Vice President



Reading through the history of the automobile, it becomes apparent that major revolutions have occurred in cycles of approximately 100 years. The first practical steam automobile appeared in 1801, but the steam car was then superseded by the gasoline powered automobile around 1900. Now, in the year 2000, the automobile is on the verge of another dramatic transformation. The problem of improving fuel efficiency and reducing CO₂ emission in order to preserve the global environment requires a fundamental reexamination of the structure of the automobile; including the drive system of the conventional gasoline automobile and the structure of the car body. These change will be difficult to realize without revolutionary progress in automotive technology. Those of us who are involved in the steel business are extremely pleased that we can participate in these historical development in automotive technology as suppliers of steel, which is used as a main material for automotive applications.

To facilitate improved fuel efficiency, improvement and innovation in the drive system and reduction of car body weight have been designated as the critical tasks. I am confident that steel materials can play a decisive role in solving both of these problems. With regard to the drive system, the drive motor will be indispensable as an energy conversion device for electric or fuel cell automobiles, and it goes without saying that the heart of any electric motor is electrical steel sheets. In reducing auto body weight, it will be necessary to guarantee body strength with smaller sheet thickness by using steel sheets with higher strength.

Since an early date, Kawasaki Steel has promoted the development of high performance, high function products which respond to a wide range of customer needs in fields that include steel sheets, electrical steel, steel pipe, stainless steel, iron powder, wire rod material and steel bars, and has also constructed production facilities for stable manufacturing and supplying of such products. In this issue of Kawasaki Steel Technical Report, which is a special issue on material for automotive usage, we have selected our most recently developed automotive materials, in addition to those which our customers have used for many years, from amongst our product line, and will introduce the quality properties of those products. We hope that Kawasaki Steel products such as high formability, high strength steel sheets, electrical steel sheets for use in electric automobile drive motors, stainless steels for exhaust system applications, high strength alloy steel powders, high processability, thin wall electric welded tubes, and lead-free steel sheets for fuel tanks will be widely studied and used as steel materials which are capable of meeting the requirements of the new automotive technologies of the 21st century. In addition, we would also like to present reports on certain product manufacturing technologies from the viewpoint of improving product quality accuracy. At Kawasaki Steel, we recognize that improvement in the accuracy of product quality, together with the development of new materials, contribute to rational auto body design and smoothing of steel material processing, therefore important tasks for supporting new automobile manufacturing technologies.

It appears that reforms in automotive technologies will progress rapidly, and will be global in

extent. We will strive to further expand and enhance technical development at this company so that Kawasaki Steel products and manufacturing technologies pioneer the development of automotive steel materials worldwide, so our customers in all parts of the world can use the products and technologies introduced in this special issue.

In closing, I would like to request the support of all our many valued customers, colleagues, and friends.