

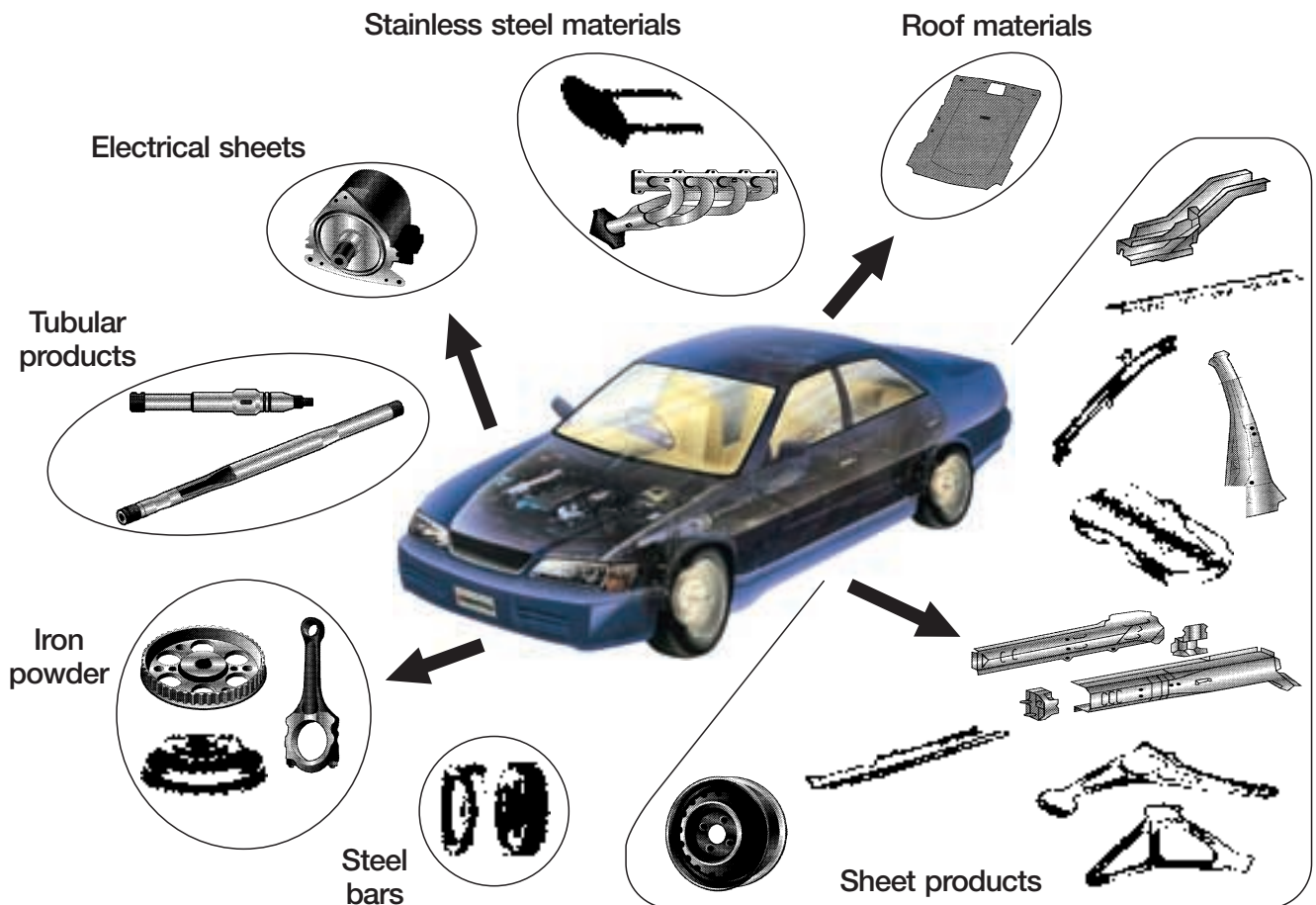
FOREWORD

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Member of the Board and Senior Executive Officer



Amid the great environmental changes which are now underway, including global environmental problems, mega-competition on a global scale, and the need to build safer, more comfortable, “environment-friendly” automobiles, both auto makers and steel makers are confronted with many urgent and important tasks. Concretely, the key words in this new environment are weight reduction, crashworthiness, corrosion resistance, high efficiency, durability, speed (shortening of the develop-



New Kawasaki Steel products which contribute to the evolution of the automobile

ment period), and of course, cost.

Kawasaki Steel has developed a large number of high strength steel sheets and coated sheet products which respond to the requirements expressed by these key words and is continuing to develop these and other new products even now. However, in addition to sheet products, the company has also been asked to develop automotive products for a diverse range of other functions. These include steel tubes for use as tube-forming materials, iron powder, wire rod, and steel bars for engine-related and drive train parts, and stainless steel for exhaust system applications. For example, important requirements that may be cited for steel materials which comprise the structural elements of the auto body, drive train, and other parts are (1) development of materials with high strength and improved formability to realize weight reduction in parts, and the development of related processing methods, (2) in stainless steel sheets for exhaust system parts, improvement of high temperature mechanical properties and corrosion resistance, and (3) in the case of electrical sheets, development of low iron loss, high magnetic flux density materials which can contribute to reducing motor size.

Accordingly, in the future, product development will not be limited to development from the viewpoint of automotive technology, corresponding to the various types of steel materials. It will be increasingly essential to understand the required properties of the automobile in a systematic way and to propose automotive parts from the viewpoint of material technology. This means that technical proposals from both the material side and the part side will be important.

A crucial point is the establishment of processing methods and conditions which make the maximum use of the properties of the material in order to solve the many technical problems which arise when a new steel material is adopted, such as plastic working, machining, heat treatment, coating, welding, assembling, and painting, among others. For this reason, I believe that a perspective which demands the optimum solution in an integrated system covering materials—processing technologies—partstructure—auto body structure is necessary.

In this special issue, we have summarized material technologies so as to be as useful as possible in the selection of processing methods and conditions for automotive parts. We also invite our readers to refer to our previous special issue on steel sheets and special issue on tubular products.

In closing, we sincerely request your continuing encouragement and advice.