

## R&D Strategy

### Creation of Appealing New Products

**AISIN aggressively promotes R&D fully conscious of the fact that utilizing technological development to create appealing products with new value contributes to both the betterment of society and expansion of business.**

#### Unique Technological Development Structure Harnessing the Strengths of Each Group Company

Each Group company within the AISIN development structure manages its own development resources and conducts highly specialized technological development in its field of strength. While concentrating resources for added efficiency is important, it is also essential for Group companies to engage in friendly competition amongst themselves in fields where creative development is more crucial. As such, AISIN employs a unique development structure that emphasizes both competition and cooperation.

Aisin Seiki is displaying initiative in every field of development through participation in each product segment, focusing on body related and engine related products. Aisin AW Co., Ltd. (Aisin AW) plays a key role in the technological development of drivetrain and information related products, Aisin AI Co., Ltd. (Aisin AI) of drivetrain related products and ADVICS Co., Ltd. (ADVICS) of brake and chassis related products. In addition, Aisin Takaoka Co., Ltd. (Aisin Takaoka), Aisin Chemical Co., Ltd. (Aisin Chemical) and other Group companies conduct elemental technology development in



Intelligent Parking Assist

such areas as iron casting, metal forming and plastic molding, while concurrently developing functional products using proprietary methods.

#### Unveiling a Succession of New Products Accurately Reflecting Customer Needs

As the needs of end-users continue to diversify, such as with global environmental preservation, assurance of safety and realization of a peaceful, comfortable driving experience, the sophistication of those needs also continues to escalate beyond previous levels. To fully provide for such needs and gain the trust of users, above all else, AISIN must perpetually undertake cutting-edge technological development and persevere with the endless pursuit of securing users' trust. With these challenges in mind, AISIN has given ultimate priority to, and is diligently promoting, the development of unique technologies and the creation of wholly appealing new products.

As a result, AISIN launched a succession of potentially



FWD 6-speed AT



Residential fuel cell cogeneration system



Toyokoro Proving Ground (Hokkaido, Japan)



lucrative products in fiscal 2004 that anticipate forthcoming user needs. One example is the 6-speed ATs, which are the first of their kind to be mass-produced worldwide. AISIN's efforts at expanding its lineup of such products, brandishing superb environmental features and compatibility with numerous engines and models, has garnered considerable respect from Japanese and overseas customers.

Together with Toyota, AISIN has also developed the "Intelligent Parking Assist" system, which is the world's first electronic parking assist system of its kind. The system, which automates the steering controls when backing into a parking space and displays the position of the parking space and surrounding area onscreen, is winning acclaim for its convenience and innovation.

In fields outside the Automotive Parts and Systems Business, AISIN forged ahead with the development of its residential fuel cell cogeneration system, which is anticipated to become a highly efficient and clean energy system.

AISIN is making optimal use of its accumulated expertise

and technologies in a broad range of product fields to establish an unrivalled technological domain and preserve its competitiveness in related markets.

### **Cutting-edge Technological Development within Four Japanese and Overseas Bases**

The worldwide family of AISIN Group includes four advanced research and development companies through which we are pursuing cutting-edge technologies in the automotive field and other areas. In particular, IMRA America, Inc. (IMRA America) and IMRA Europe S.A.S. are collaborating with local universities and research institutes on state-of-the-art technology in optronics, and information and energy, respectively. IMRA America has developed femtosecond fiber laser\* technology and commercial products that have gained a strong reputation in the laser industry. Applications include optical telecommunications, micromachining, advanced instrumentation, physical and chemical science research, and healthcare.

\*The laser emits optical pulses with a pulse duration on the order of a femtosecond (1 fs =  $10^{-15}$  s).

### **Invaluable Proving Facilities for Heightened Product Reliability**

AISIN has the world's most illustrious proving facilities, which are capable of evaluating not only components, but component-mounted vehicles as well. In addition, in North America and Europe AISIN conducts field-testing to assess product performance and durability under varying conditions. Such facilities are an irreplaceable element for ensuring and enhancing the reliability of AISIN products, and AISIN aims to further augment these facilities and their structures in the future.



Energy laboratory



Femtosecond fiber laser



IMRA America, Inc.