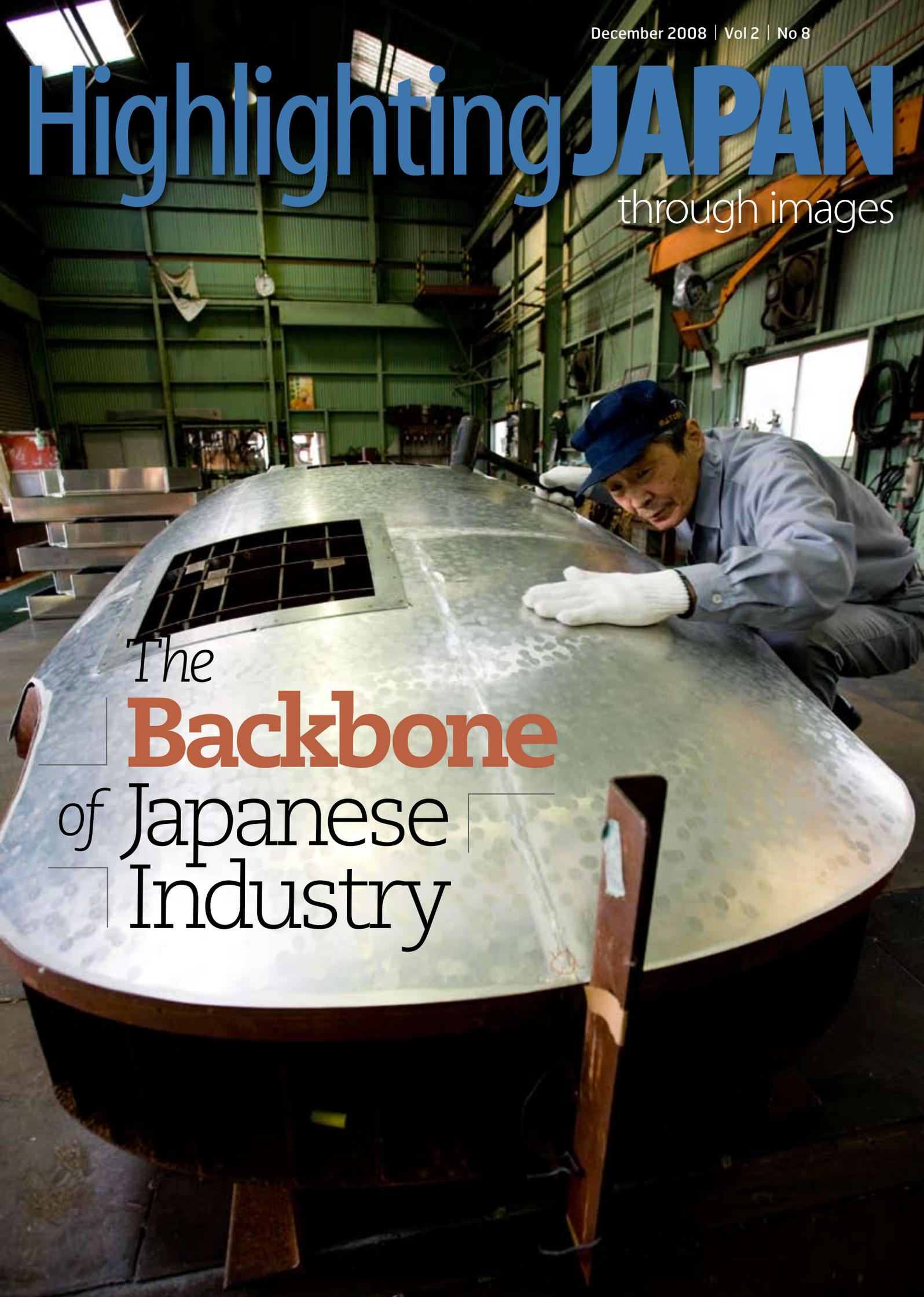


# Highlighting JAPAN

through images



The  
**Backbone**  
of Japanese  
Industry

## 4 SPECIAL FEATURE JAPANESE INDUSTRY

Accounting for some 99% of Japan's companies, small and medium enterprises form the backbone of Japanese industry and the country's economy. With their world-class technologies and innovative ideas, these enterprises constitute the source of Japan's global competitiveness.



**ON THE COVER:** Yamashita Kogyosho Co., Ltd. sheet metal worker Jiro Kunimura fine tunes a part for a Shinkansen car using a hammer.

SEIYA KAWAMOTO

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Prime Minister Taro Aso joined other leaders to discuss combating the financial crisis at the G20 Summit held November 14 to 15 in Washington D.C.

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Prime Minister Aso traveled to Peru on November 21 to attend the APEC Economic Leaders' Meeting, where he met with various world leaders.



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# The Backbone of Japanese Industry

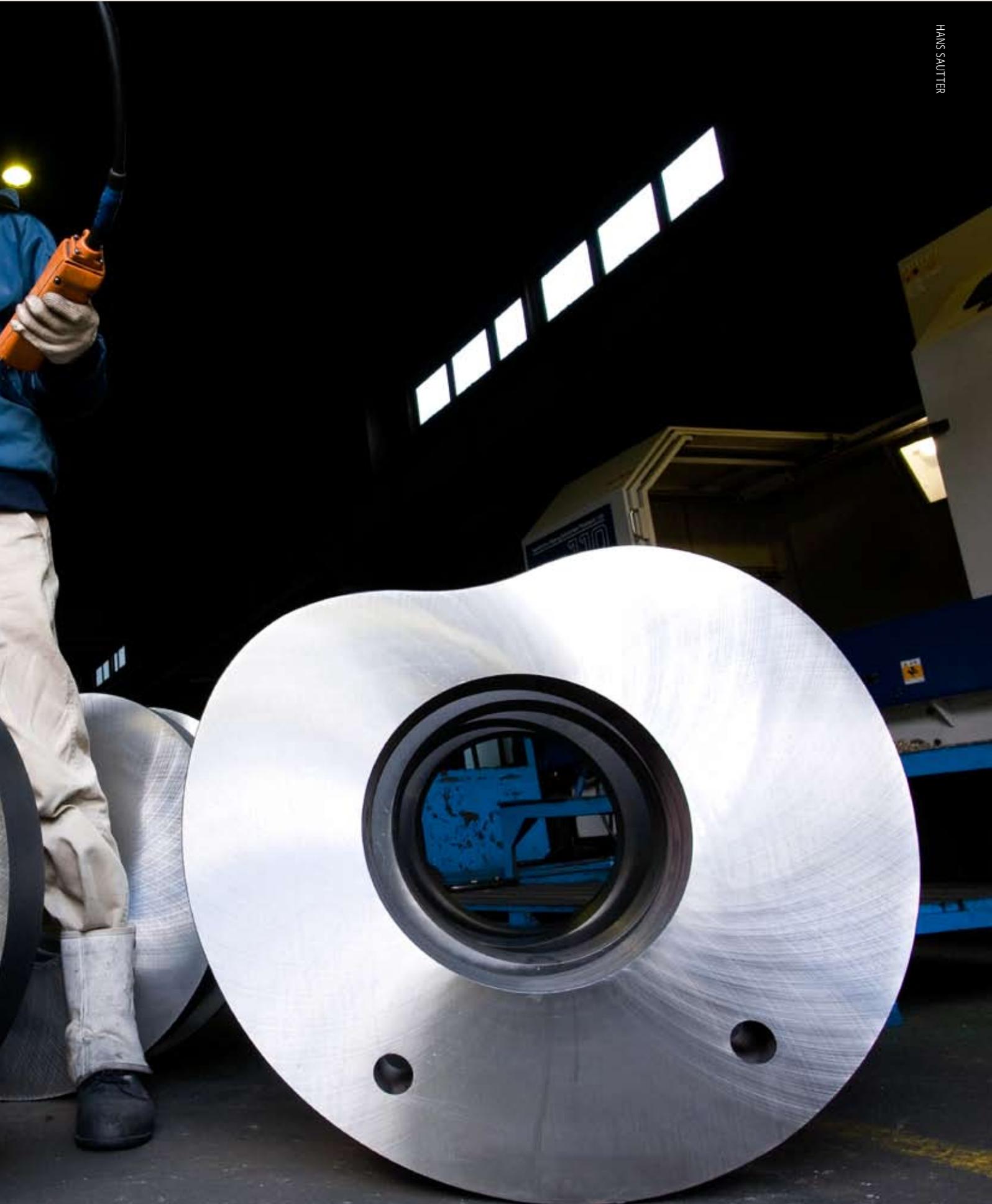
Small and medium enterprises account for some 99% of Japan's companies, forming the backbone of Japanese industry and the country's economy. Among these small and medium enterprises are those with the world's highest technological levels, and others that create new added value with their innovative ideas, and it is these enterprises that are the source of Japan's global competitiveness. This month, we look at some of these unsung heroes, and promising players of Japanese industry.

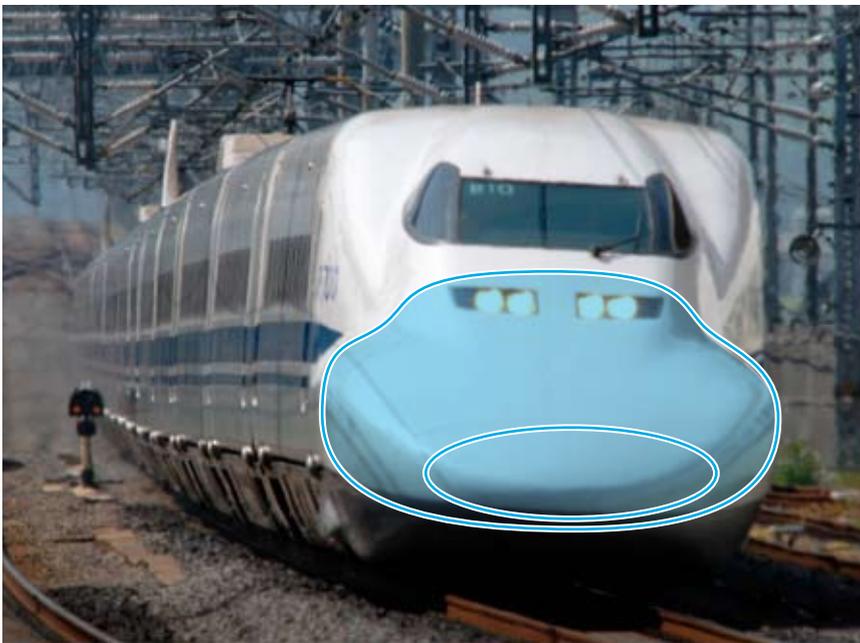
**PHOTO:** A Syoei Co.,Ltd craftsman hoists a giant cam for use on a 8150-unit container ship. With its superior heat treatment technology, Syoei commands a 60% share of the global market for this type of cam.



SPECIAL FEATURE

HANS SAUTER





AFLO

SEIYA KAWAMOTO

## The **Face** of the **Bullet Train**

The *shinkansen*, or “bullet train” as it is known overseas, is the super express train that made Japan’s railway technology known to the world when it debuted in 1964. One of its most distinctive features is the elongated “forehead” at the front of all the main models, many of which were produced by artisans working for the same company.

Yamashita Kogyosho Co., Ltd. is a small urban factory in Kudamatsu City, an industrial city in Yamaguchi Prefecture. The company has worked on the

body structure of the front of most major models of the *shinkansen* from the 0 Series to the 700 Series. It has also worked on express trains as well as monorails and experimental cars for MAGLEV trains, and receives orders for train cars from places as far afield as China, Taiwan, Dubai, Singapore and South Korea.

There are very few companies in the world with sheet metal beating skills that can equal the capabilities of Yamashita Kogyosho. Aluminium sheets just



**FACING ABOVE:** A part of the face of the Shinkansen 700 series manufactured by Yamashita Kogyosho Co., Ltd.

**FACING BELOW:** The blue part on the face of the *shinkansen* indicates the component being produced in the above photo.

**THIS PAGE:** The interior parts of a *shinkansen* manufactured by Yamashita Kogyosho.

a few millimeters thick are hammered into shape over an anvil. The completed parts are then welded together to produce the elegant, streamlined shape of the leading car.

“You can tell by the sound of the hammer on the metal if there is any distortion in the shape,” says Jiro Kunimura, a sheet metal worker who is also one of the company’s founding members. “There is far more to the job than meets the eye, and I reckon it takes a good ten years before you are anywhere near mastering it.”

In recent years, the industry has seen a shift to

using cutting machinery for the process of shaving away parts of a metal body, but the manual skills of the company’s workers come into their own for very fine linings on interior parts or for complex shapes.

The president of the company himself, Kiyoto Yamashita, was himself originally an outstanding automobile sheet metal worker. Hitachi, Ltd., one of the companies contracted to make the *shinkansen* cars, appreciated his ability and established Yamashita Kogyosho in 1963 to manufacture the *shinkansen*. “It feels like I have always lived with the *shinkansen*,” Yamashita says.



## Cosmetic Sponges

Chanel, Christian Dior, Estée Lauder — all cosmetics brands beloved by women the world over. While it is not well known, these and other leading cosmetics manufacturers share something in common: they all use cosmetic sponges made by Yukigaya Chemical Industry Co., Ltd., a company based in Tokyo's Ota Ward. Sponges for applying foundation or other types of cosmetics need to have different textures, densities and shapes depending on which cosmetics they are used for. Yukigaya is able to make approximately 1,000 different types of sponge to meet the most exacting needs of its clients, and the company now boasts a roughly 70% share of the world market in cosmetic sponges.

Yukigaya was founded in 1951, manufacturing

sponge for cushions and similar applications. In the 1960s, when Japan was experiencing a period of rapid economic growth, the cosmetics industry also saw dramatic growth. The sponges used at the time to apply foundation were made of natural rubber, and because they were not very resistant to oils, they suffered from rapid deterioration.

Yukigaya set out to develop a sponge that was not only resistant to oils but also felt pleasant to the touch, finally perfecting a new NBR sponge material in 1976. Under the brand name Yukilon, the new sponge rapidly began to dominate the Japanese market, achieving an 80% share by 1981. Yukigaya started dealing with the top cosmetics brands overseas at the beginning of the 1980s, eventually



achieving its current share of the world market.

"We have never specifically gone after the benefits of being a big company," says company President Mitsuhiko Sakamoto. "Since our company was founded, we have inherited the venture spirit of not wanting to make the same things as everyone else. We want to make things that shine with a light you cannot find elsewhere."

The company has completed the long-awaited development of a new cosmetic sponge called Tera Venus, which will make its world debut next spring. It probably won't take long for this new sponge to help Yukigaya dominate the world market again.

**@ ON THE INTERNET**

<http://www.yukilon.co.jp/index.html>

**FACING:** Sponges are produced by making the base material into a foam, which is then solidified and steamed. Here, a sponge is being taken from the mold after the steaming process is complete.

**CLOCKWISE FROM UPPER LEFT:** Sponges are checked after the steaming process. • The completion of the steaming process of the raw materials. • Completed sponges. • Individual sponges are cut out from a large sheet by machine.

**BELOW:** During the development stage, air tightness and other factors are checked with an electron microscope.





Tsubame City in Niigata Prefecture is well known throughout Japan as one of the country's biggest producers of metalwork products. Metalworkers and companies in Tsubame City have set up a Polishers' Syndicate, sharing orders among each other and training their eventual successors.

There are nearly 600 metalwork businesses in the Tsubame region. One of these, Kobayashi Kengyo, has garnered an astounding degree of trust among such major Japanese companies as Sony, Panasonic and Honda, which all maintain that for metal grinding or polishing, Kobayashi Kengyo is the place to go. Kobayashi Kengyo leapt to national fame with its manufacture of metal backs for the iPod portable music player released in 2001 by Apple, Inc. The iPod backs are polished to mirror smoothness. At the time the iPod was released, manufacture was contracted to Toyo Rikagaku Kenkyusho Co., Ltd. However, the manufacturing process called for a high level of skill, and after a series of failures Kobayashi Kengyo was asked to take over. Within just one week, Kobayashi Kengyo was manufacturing products good enough to sell. Over the ensuing four years or so, Kobayashi Kengyo and other metal polishing companies from Tsubame City worked on polishing the iPod, and their combined technical strength was highly acclaimed both in Japan and overseas.

Company President Kazuo Kobayashi first started polishing metal 46 years ago. "No matter how difficult the material is to polish, I never give up on it," he says with pride. The turning point for his company came ten years ago, when the big jobs the company had previously worked on dried up, and Kobayashi

Kengyo found itself facing a crisis. Kobayashi made a bold decision: the company would use the well-honed manual skills of its artisans, without relying on machines. "We gave away four of our five automatic polishing machines to companies in the same line of business, and made a declaration that we would take work on the basis of our technical skills," he explains. The company proactively tackled jobs polishing new materials which were hard to work with and which other companies shied away from. As a result, orders began to flow in steadily from major electrical appliance manufacturers.

Kobayashi concludes, "This is just a small factory but we have technical strengths that major manufacturers don't have."



## Polished Performers

**LEFT:** A polishing cloth called a “buff” is rotated at high speed and pressed against the parts to be polished. Experienced polishers are able to detect surface irregularities of just a few dozen microns by touch. Kobayashi Kengyo polishes parts for applications ranging from computers to audio devices.

**BELOW (L TO R):** Products processed by the Polishers’ Syndicate include cutlery, mugs, reusable Eco Cups and i-pods.





## Precision Parts

There is currently great interest in the use of magnesium, a raw material that combines lightness and strength. It has the advantage of being lighter than aluminium yet nearly ten times stronger than plastic. However, magnesium has only been put to practical use in the last few years because of the problems associated with casting it. First, liquid magnesium has poor fluidity. This means that when molten magnesium is poured into a cast, it is difficult to make it reach every corner of the mold. A further weakness is that the surface is not uniform, but tends instead to be scratchy.

ARRK Okayama Co., Ltd., a precision machinery parts manufacturer, has managed to overcome these difficulties through cooperation among industry, academia and government. By collaborating with researchers from Okayama Prefectural University who specialize in flowing analysis and with Okayama Industrial Research Institute, ARRK Okayama has succeeded in achieving a breakthrough that would have been impossible for a company acting on its own. It now uses magnesium in applications such as the housing of mobile phones and the bod-

**FACING (TOP):** Components made of magnesium used in the bodies of mobile phones.

**FACING (BOTTOM):** Assembling a component for the arm of a robot that will be used to transport goods. One of ARRK Okayama's major attributes is the great care taken throughout the entire production process.

**INSET:** Components completed just two weeks after receiving the three-dimensional data for the order.

ies of digital cameras.

"Unlike major corporations, small and medium enterprises just don't have the capacity to run their own research laboratories," says ARRK Okayama President Kazushi Yashiki. "The cooperation among industry, academia and government is extremely significant in terms of compensating for this weakness of smaller companies."

ARRK Okayama was established in 1973 as a subcontractor making precision parts for Minolta cameras. It carried out integrated manufacturing that included the processing of parts, coating and assembly. The company made use of the expertise it acquired in this way by starting to manufacture precision parts for products other than cameras, and in 2005 it became a member of ARRK group providing product development support. It has grown into a parts manufacturer capable of accepting any order, no



matter how demanding, from major corporations. ARRK Okayama receives many orders for the sort of new product parts that create the very latest value-added goods such as mobile telephone housings fitted with large-screen LCD monitors. The company has steadily increased its technological strength by managing to overcome the demands required by these difficult orders one by one. It is this accumulation of technical strength that is the backbone of Japanese manufacturing.

## Color Universal Design

Itoh Optical Industrial Co., Ltd., a company based in Aichi Prefecture, is the first company in Japan to make a practical application of coatings for glass lenses. The company drew an enthusiastic response with the release in April last year of the Variantor (*photo bottom*), a special filter that allows anyone to experience the world seen by people with color vision deficiencies.

The initial impetus for the development of this

product came when company President Hiroshi Itoh met Professor Shigeki Nakauchi of Toyohashi University of Technology, who researches how people see colors. The Variantor took shape as a product through cooperation between industry and academia : Toyohashi University of Technology put forward the theory on the basis of which Itoh Optical Industrial developed the product. The performance was then measured and evaluated at Kochi University of Technology.

“There is more important information mounted on colored backgrounds than most people realize, such as in text books, signs, or graphs,” says Kanae Miyazawa, a member of the Technology Division of Itoh Optical Industrial. “With the Variantor, people with normal vision can understand how this information appears to color-deficient people, making Color Universal Design possible.”



PHOTOS: KEIZO OKUBO

**PHOTO, TOP:** The Variantor is made by creating a metal film on the lens which alters the refractive index of the lens.

## Senior Power

In response to the many workers recently retired or about to retire, who seek to continue contributing at the workplace, the Small and Medium Enterprise Agency has established a program which uses the experience of such workers. The Reactivated Worker Support Program, which started this year, registers those who are about to or have already retired from the workforce, and matches their skills to the diverse needs of small and medium enterprises. At present approximately 8,000 people are registered.

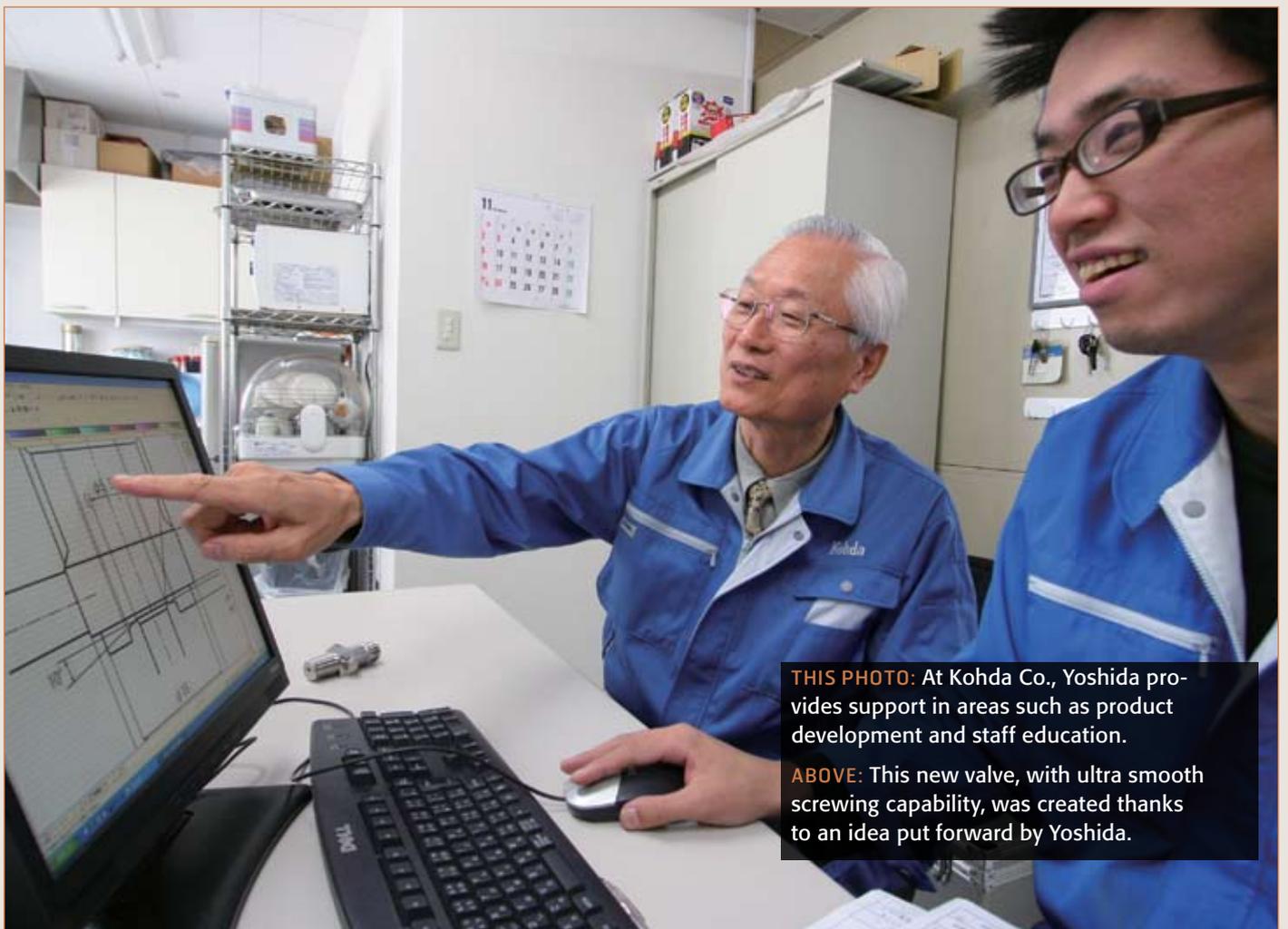
Takuo Yoshida is one such person, providing support based on 40 years of experience in technology and product development working at NEC, one of Japan's leading electronics manufacturers. "I had too much energy to retire," says Yoshida.

He currently offers advice to Kohda Co., which designs and manufactures valves for various types of containers. Yoshida was asked to provide assis-

tance as Kohda's development of diaphragm valves for semiconductor gas was lagging behind other companies. With Yoshida's help, the company succeeded in developing and patenting three new products, including a diaphragm valve. Company president Naotaro Kohda was full of praise for Yoshida's contribution, saying, "He developed new products for us with the kind of ideas that people working solely in the valve industry could not."



PHOTOS: SATOSHI KAWAI



**THIS PHOTO:** At Kohda Co., Yoshida provides support in areas such as product development and staff education.

**ABOVE:** This new valve, with ultra smooth screwing capability, was created thanks to an idea put forward by Yoshida.



## The **Quest** for Manufacturing **Excellence**

**B**ased in Okayama Prefecture, Syoei Co., Ltd. enjoys a 60% share of the global market for cams used in the manufacture of ship engines. The most notable feature of ship engines is their massive size. Tankers weighing more than 20 million tons require engines able to generate over 100,000 horsepower. The cams used in these giant engines need to be incredibly precise and durable in order to keep repeating the movements required through an operational life of over 20 years.

Syoei's strength is its extremely high level of expertise and technologies in the areas of heat

treatment, cutting, and surface grinding. Company President Setsuzo Tsujii says that the key to this technological prowess is the craftsman's well-honed sense of exactly how a product should turn out.

"For example, craftsmen watch over the heat treatment process for almost 60 hours. Time and time again during that period, they pull out test pieces and make judgments on the process. In order to do this, they need the same type of craftsman's skill as that possessed by swordsmiths and potters. The bottom line is that even when the entire process is conducted according to a computer program,



**THIS PHOTO:** One stage of the manufacturing process for a fuel injection device to be used in a computerized engine. This kind of fuel injection device is Syoei's next-generation core product.

things don't always go exactly to plan. So experience is essential to the process and in determining the quality of the finished product."

Syoei has applied these same highly refined skills in the manufacture of fuel injection devices for the computerized engines of ships, gradually creating a core product that serves as an alternative to cams. Working in the same manner as in computerized engines in automobiles, these devices make delicate adjustments in fuel injection possible beyond what can be achieved with a cam. To realize this development, Syoei makes use of a broad network of small and medium enterprises. Collaboration with Aichi Prefecture-based company Aico, which carries out the precision processing of blocks, and the Tani-guchi Heat Treatment Co., Ltd. in Ehime Prefecture, which conducts surface heat treatments, led to the mutual strengths of the companies being brought together to provide solutions to technological challenges.

When walking around the Syoei factory, it is clear that the craftsmen take great pride in their creations. Perhaps this is the secret that lies behind the quality suggested by the words "Made in Japan."



**ABOVE & RIGHT:** A fuel injection device for the computerized engines of ships such as the ship in the above photo. By making use of a system which links companies from across Japan, this hi-tech product integrates the technologies of three small and medium enterprises based in diverse locations.





## ASO ATTENDS G20 SUMMIT

The Summit on Financial Markets and the World Economy was held on November 14-15 in Washington D.C. in order to explore means of international cooperation to counter the financial crisis that is spreading on a global scale. The summit was attended by the leaders of the Group of Twenty, which includes Japan, the United States, a number of European countries as well as emerging economies such as China and India.

Prior to the summit, Prime Minister Taro Aso held bilateral talks with President Luiz

Inacio Lula da Silva of Brazil, Prime Minister Gordon Brown of the U.K, and President Susilo Bambang Yudhoyono of Indonesia.

At the working dinner on November 14, Prime Minister Aso indicated the need to make the role of the International Monetary Fund (IMF) in combating the financial crisis one that well matches the needs of the new era. He stressed the need to expand the Fund's assistance to emerging economies as well as medium and small states and to strengthen its early-warning function. He stated that Japan



**FACING:** A view of the G20 Summit. • **ABOVE:** World leaders attending the G20 Summit. • **BELOW:** Prime Minister Aso at the G20 Summit.

was ready to lend up to \$100 billion to the International Monetary Fund (IMF) to help it meet the first of these objectives.

At the plenary session on November 15, G20 leaders issued a declaration stating *inter alia* their intention to take all necessary measures to stabilize the financial system and the need to strengthen the IMF's role in responding to crises. The working lunch that followed

focused on free trade and investment. Against the backdrop of the current world economic situation, leaders expressed their resolve to reject protectionism and to strive to reach agreement this year on modalities for a successful conclusion to the Doha Development Agenda of the World Trade Organisation.

At a press conference held after the close of the summit, Prime Minister Aso said, "We must translate the results of this summit into concrete action. I will continue to exercise leadership so as to put in place an international economic system that responds to the challenges posed by the new world economy and financial markets." He expressed Japan's intention to utilize its experience gained in overcoming the crisis which followed the collapse of its economic bubble in the 1990's, and to take the lead in building a new framework.

PHOTOS: JUI



**@ ON THE INTERNET**

[http://www.kantei.go.jp/foreign/asophoto/2008/11/14kinyusummit\\_e.html](http://www.kantei.go.jp/foreign/asophoto/2008/11/14kinyusummit_e.html)  
[http://www.kantei.go.jp/foreign/asophoto/2008/11/15kinyusummit\\_e.html](http://www.kantei.go.jp/foreign/asophoto/2008/11/15kinyusummit_e.html)



## ASO ATTENDS APEC ECONOMIC LEADERS' MEETING

Prime Minister Taro Aso travelled to Lima, the Peruvian capital on November 21 to attend the Asia-Pacific Economic Cooperation (APEC) Economic Leaders' Meeting. Upon arrival, he held bilateral talks with President Nguyen Minh Triet of Vietnam and President Alan García Pérez of Peru. On November 22, Prime Minister Aso held talks with U.S. President George W. Bush, after which the two were joined by President Lee Myung-Bak of the Republic of Korea (ROK) for a trilateral Japan-US-ROK summit meeting. Prime Minister Aso

subsequently attended the Leaders' retreat I of the APEC Economic Leaders' Meeting, where he discussed with other leaders the international financial crisis, the promotion of food and energy security, and the WTO Doha Development Agenda negotiations. With regard to international economic and financial issues in general, he noted the importance of carrying out the concrete actions agreed at the G20 Summit held in Washington, D.C. the previous week, and of APEC to deal with the financial crisis. Following the Leaders' retreat I, Prime



CABINET PUBLIC RELATIONS OFFICE

**FACING:** Prime Minister Aso together with other leaders in the APEC summit commemorative photograph.

**ABOVE:** Prime Minister Aso reflects on the summit at a press conference for the Japanese and international press following the summit.

Minister Aso held talks with President Álvaro Uribe Vélez of Colombia, and President Dmitry Anatolyevich Medvedev of Russia and President Hu Jintao of China.

On November 23, Prime Minister Aso held talks with President Felipe Calderón Hinojosa of Mexico. Subsequently, he attended the Leaders' retreat II, where he discussed the promotion of global economic integration, corporate social responsibility, climate change issues and human security with the other leaders. On the climate change issue, he called for countries around the world, including the APEC economies, to share the goal of reducing global greenhouse gas emissions by at least half by 2050, as was agreed at the G8 Hokkaido Toyako Summit. Afterwards, a leaders' decla-

ration, which calls for the promotion of global economic integration and countermeasures against global warming, was adopted, bringing the APEC summit to its conclusion.

Prime Minister Aso then held a press conference at which he indicated Japan's agreement with the World Bank jointly to establish a US\$3 billion fund to inject capital into banks in developing countries and emerging economies. He said, "For its part, Japan must fulfill its responsibility to the international community by fully implementing the initiatives it has announced and restoring its economy on the growth track".

**@ ON THE INTERNET**

[http://www.kantei.go.jp/foreign/asophoto/2008/11/21apec\\_e.html](http://www.kantei.go.jp/foreign/asophoto/2008/11/21apec_e.html)

[http://www.kantei.go.jp/foreign/asophoto/2008/11/22apec\\_e.html](http://www.kantei.go.jp/foreign/asophoto/2008/11/22apec_e.html)

[http://www.kantei.go.jp/foreign/asophoto/2008/11/23apec\\_e.html](http://www.kantei.go.jp/foreign/asophoto/2008/11/23apec_e.html)

**D**aido Moriyama is a photographer who has always wandered the world's roads. Shinjuku, Paris and New York—wherever Moriyama's travels take him, the cityscapes he etches in black and white are invariably hip, trashy and, above all, sexy. Typical subjects include flashing neon, garish posters, and women. Roaming the backstreets with a compact camera in hand, he sometimes shoots without even using the viewfinder. For his latest exhibition at the Museum of Contemporary Art, Tokyo, he took his camera to São Paulo in Brazil, but his photographic style is constant. "Whether I am in Japan or overseas, I always want to photograph chaotic city scenes where people, objects and buildings are all jumbled together," says Moriyama.

From the 1980s onward Moriyama could generally be found clicking the shutter in cities overseas, but these days he feels he most wants to take pictures in Tokyo. "I always had the thought that New Yorkers shoot New York and Parisians photograph Paris,"



Daido Moriyama | São Paulo | 2008 | B/W print

recalls Morimoto. "And that we shoot Tokyo. But it's not like I felt it was my mission to capture Tokyo on film. Lately when I've been out and about in Tokyo doing things, I've stumbled on many spots I didn't know about. When I glimpse an unknown place, I get antsy. I feel kind of impatient. It's a funny way of putting it, I know, but I feel jealous of that spot."

At 70, Moriyama still stands in the street like a stray dog or a menacing punk from one of his photos; where does his tireless energy for photography come from?

"I've lived a reckless life and never looked after my health," answers Moriyama with a chuckle. "But I've got tough insides. And a photographer lives by his gut! I'm half joking, but it's important to always be true to your current appetites. Once a photographer stops being hungry, it's all over."

**FACING:** Moriyama at an exhibition of his work, *bye-bye polaroid*, currently showing at Taka Ishii Gallery in Tokyo.



COURTESY OF TAKA ISHII GALLERY

Daido Moriyama | Misawa | 1970 | B/W print

## DAIDO MORIYAMA

## ON THE ROAD



Born in Osaka in 1938, Moriyama's unique style rocked the world of photography in the 60s and 70s. In 1999, the San Francisco Museum of Modern Art hosted an exhibition of Moriyama's work. In 2003, the Fondation Cartier pour l'art contemporain staged another solo exhibition. Through January 12 his work can be seen in the *Daido Moriyama and Miguel Rio Branco Photographic Exhibition: A Quiet Gaze, Echoing Worlds*, at the Museum of Contemporary Art, Tokyo.

**ON THE INTERNET**

<http://www.mot-art-museum.jp/english>  
<http://www.moriyamadaido.com>

# History of Gadgetry



FACING: The Osaka University vacuum tube electronic calculator • LEFT: The TYK wireless telephone, a world-first • CENTER: Sharp Corporation's Compet electronic desk calculator • RIGHT: Victor Company's VHS home video player

In October of this year, the National Museum of Nature and Science launched a new system for registering historically significant items in the science and technology field. The system will ensure that devices of historical importance and gadgets with a major impact on society, culture or everyday life are preserved for future generations. Following a survey encompassing all of Japan's past science and technology efforts, the first round of registrations selected 23 items to be preserved for posterity. Here are a few examples.

The TYK wireless telephone, now in the Communications Museum collection in Tokyo, was a world-first. After Marconi invented the wireless telegraph, there was fierce international competition to develop a wireless telephone, and Japanese inventors succeeded in doing so around 1913. An eagerly-awaited invention in its day, this device has a well-deserved place in history. The Osaka University vacuum tube electronic calculator, held by the Museum of Osaka University, was developed at the

dawn of Japanese computing. Building this device in the 1950s put the university at the forefront of computer development in Japan and the world.

Launched in 1964, Sharp Corporation's Compet electronic desk calculator was the world's first all-transistor-diode calculating machine. This product was the precursor of light, compact calculators for the masses. The HR-3300 VHS home video launched by Victor Company of Japan in 1976 was the first-ever VHS-format video device. VHS subsequently became the global standard, and total production in 2006 exceeded 900 million units. This invention sparked the popularization of home video, changing the lives of people the world over.

Looking back at these items, now preserved as part of our technological heritage, is bound to prompt a sense of nostalgia. These milestones on the road to scientific progress will help to pave a path to the technologies of the future.

**@ ON THE INTERNET**

<http://www.kahaku.go.jp/english/>

# DOUBLE THE FUN



Is it a bus or is it a train? The world's first dual-mode vehicle (DMV), capable of running on both road and rail, has been produced by Hokkaido Railway Company (JR Hokkaido). The development of such dual-purpose vehicles has a surprisingly long history. Prototypes were built in Britain, Germany and other places starting around 75 years ago, but none of them ever entered into service.

"The main reason they never became a reality

was that the technology of the time couldn't cope with the mode change from road to rail," explains Toshio Nanba, head of JR Hokkaido's DMV Center. "Mode change on these early dual-purpose road/rail vehicles took four to eight minutes. At that rate, it was much quicker for passengers to disembark and transfer to another vehicle. By teaming the latest hydraulic technology with electronic control, we reduced the time required for mode change to just



**ABOVE:** The DMV running on rails. The first dual-purpose road/rail vehicle was developed some 75 years ago in Britain, but it never entered into service. Until the DMV was developed, such vehicles remained a dream.

**FACING:** The DMV is driven by rubber tires on the rear of the vehicle. When it runs on rails, the front tires are retracted.

10 to 15 seconds. This was the deciding factor in bringing the DMV into service."

A low operating cost is a key attribute of the DMV. Since it runs on existing rails and roads, there is no need for investment in expensive infrastructure. Moreover, because the DMV is based on a microbus

platform, purchase, fuel and maintenance costs are lower than for conventional trains.

The DMV is currently operating on a trial basis in Hokkaido. In approximately three years time, once the seating capacity of the DMV has been increased from the current 16 to more than 25, carriage-coupling issues are resolved and the safety of operating systems are improved, JR Hokkaido aims to launch the DMV into full-time service.

TOPICS



# THE WORLD OF Itasha

**A NEW VARIANT** of *otaku* culture has sped onto the scene in Japan: the *itasha*. Itasha are cars that have their bodies decorated with pictures of characters from *manga*, *anime* or video games. The word *itasha* is a combination of the Japanese words *itai* (painful) and *sha* (vehicle). *Itai* here means painful as in “painfully embarrassing” because the car stands out when being driven on the road. The term connotes self-mockery and is also a pun on the word for Italian cars, similarly abbreviated in Japanese as “*itasha*.”

Customized *itasha* began to appear when *otaku* culture first started to gain popularity around 2000. In recent years, the *itasha* movement has enjoyed a subdued upswing in popularity, with the creation of an Internet community and the publication of spe-

cialty magazines such as *Itasha Road* and *Itasha Graphics*. The ItaG Festival exhibition was held in Odaiba this November, attracting approximately 400 *itasha* from around the country. Images of popular characters, such as Miku Hatsune, Haruhi Suzumiya and Rozen Maiden, adorned all types of vehicles, including sports cars, sedans and trucks. Cut-out stickers and air-brushed images appear on the hoods, doors and rear windows. Some car owners take it so far as to decorate the interior with printed cushions or figurines.

“Normally the aim of customizing a vehicle to enhance performance, but with *itasha* making the character stand out is the most important thing,” explains an ItaG Festival staff member. “It is a mode of *otaku* of culture that was initially driven totally by the individuals involved, but we want to increase its momentum through this type of event.”

**EXHIBITION PHOTOS:** Scores of *itasha* gathered for the ItaG Festival. The passion felt by the vehicle owners for their chosen characters is clear for all to see.

TOURISM

PHOTO: SATOSHI KAWAI

# Mao Danqing

Writer

YŌKOSO JAPAN! AMBASSADOR

Mao guides actress and novelist Tian Yuan, who has many fans among younger Chinese, near Osaka's newest hot-spot, Herbis Plaza in Nishi-Umeda.



China is currently experiencing an unprecedented boom in overseas travel. High-quality travel magazines have been launched in quick succession over the last few years and their sales are growing. The publishers who produce these magazines send writers and photographers off to various countries to conduct research and interviews, and they print well-informed tourist information. Articles on Japan, for example, feature out-of-the-way tourist spots, such as Sado Island and Okinawa. Travel writers discover the charms of such places for themselves and create articles about them. Moreover, travel magazines are not the only source of information: brochures, guidebooks and other publications offer mountains of information on overseas travel.

Given this surplus of information, there is no point presenting the attractions of Japanese travel in an ordinary way. Chinese readers interested in overseas travel seek information that has added value at its core. One of the ways I communicate information about Japan is to tell Chinese opinion-leaders about its appeal, so that people can learn more about Japan through the words of such influential figures. I have invited Chinese artists including the movie actress Zhang Ziyi, China's most famous writer Mo Yan, and *Postmen in the Mountains* director Huo Jianqi to Japan to see tourist destinations for themselves. Recently I showed fast-rising actress and novelist Tian Yuan around Osaka's trendiest shopping mall. Tian enjoys enormous popularity among the younger generation, so it will be fascinating to see what she has to say about the lure of Japan.



Chinese-born Mao Danqing developed an interest in Japanese culture when he was a student at Peking University. Since coming to Japan in 1987, he has traveled extensively around the country and contributed articles to Chinese travel magazines. He has also introduced Japanese culture to Chinese audiences in other ways, such as by publishing a collection of essays on Japan.

#### A Wider Focus



The Tourism Agency is working to support an initiative to create "tour-

ism regions" that link multiple tourist areas together in way that makes it easier for both overseas and domestic tourists to enjoy the region for a period of at least three days and two nights.

This project will strive to boost the allure of these tourism regions to entice tourists to visit on extended stays. This will be accomplished through a better offering of accommodation plans and activities to experience what these places have to offer through collaboration among municipalities, tourism associations, accommodation facilities, entities in charge of transportation, local residents and individuals involved in agriculture, forestry and fisheries, as well as commerce and industry. Currently, such efforts are underway to prepare 16 tourism regions around Japan.

These monthly YŌKOSO! JAPAN Ambassador articles serve to promote tourism by publicizing efforts to increase the number of tourists coming to Japan, while outlining these ambassadors' activities showcases the allure of travel to Japan.

<http://www.japantravelinfo.com/top/index.php>

<http://www.mlit.go.jp/kankocho/en/>



# Pristine Alpine Environment

Daisetsuzan refers to the cluster of volcanoes located in central Hokkaido. Dominated by Hokkaido's highest peak, Mt. Asahi, which towers to a height of 2,290 meters, the group includes numerous mountains rising over 2,000 meters. Daisetsuzan's lower reaches are blanketed in virgin conifer forests, which highlight the region's natural alpine beauty. Remaining untouched to this very day, these mountains are home to some 240 species of alpine flora—40 percent of Japan's total—as well as relict species of rabbits and butterflies.



LEFT: Japan's largest national park, Daisetsuzan is valued by nature-lovers • ABOVE: A larch forest in spring.





**TOP LEFT:** The summit of Mt. Asahi, the highest peak in the Daisetsuzan range, offers a truly magnificent vista of the winter expanses of Hokkaido.

**FAR LEFT:** The *masutake* mushroom is named for its color, which resembles that of a trout, or *masu*, in Japanese.

**LEFT:** The fall hues of trees on the lower reaches of Mt. Asahi .

**TOP RIGHT:** Once into November, the larch forests are transformed into silvery landscapes.

**RIGHT:** A sea of trees at Daisetsuzan is shrouded in mist one morning in early summer.



PHOTOS: MINORU OKUDA

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