



## 2018年台北國際塑橡膠工業展覽記者會

The Press Conference of Taipei PLAS 2018

日期／時間：2018年8月15日(星期三)下午2時30分

Date：14:30, Friday, August 15, 2018

地點：南港展覽館四樓403會議室

Venue：Meeting Room 403, Level 4, NANGANG Exhibition Center

### 程序表 Agenda

|                     |  |   |
|---------------------|--|---|
| 14:30<br> <br>14:35 | 臺灣機械工業同業公會監事會<br>魏召集人燦文<br>鳳記國際機械股份有限公司            | Remarks by Mr. Larry WEI<br>Convener of TAMI Board of Supervisors<br>Industry   |
| 14:35<br> <br>14:40 | 中華民國對外貿易發展協會<br>展覽處黃處長漢唐                           | Remarks by Mr. Thomas HUANG<br>Executive Director of Exhibition Department<br>Taiwan External Trade Development Council<br>(TAITRA) |
| 14:40<br> <br>14:45 | 臺灣機械工業同業公會<br>塑橡膠機械專業委員會<br>王會長俊賢<br>富強鑫精密工業股份有限公司 | Remarks by Mr. Alan WANG<br>Chairman of Plastic & Rubber Machinery<br>Committee of TAMI   |
| 14:45<br> <br>14:50 | 臺灣機械工業同業公會<br>塑橡膠機械專業委員會<br>王副會長誠<br>震雄機械廠股份有限公司   | Remarks by Mr. Michael WANG<br>Vice Chairman of Plastic & Rubber Machinery<br>Committee of TAMI                                     |
| 14:50<br> <br>14:55 | 臺灣機械工業同業公會<br>塑橡膠機械專業委員會<br>謝副會長樹林<br>銓寶工業股份有限公司   | Remarks by Mr. Bush HSIEH<br>Vice Chairman of Plastic & Rubber Machinery<br>Committee of TAMI                                       |
| 14:55<br> <br>15:00 | 臺灣機械工業同業公會<br>王秘書長正青<br>塑橡膠機械產業現況報告                | Remarks by Mr. C. C. WANG<br>President of TAMI<br>Overview of Plastics & Rubber Machinery<br>Industry                               |
| 15:00<br> <br>15:20 | 問與答  | Q & A   |
| 15:20               | 散會   | Adjourn   |



## **Remarks by Mr. Larry WEI**

### **Convener of TAMI Board of Supervisors Industry**

Ladies and gentlemen, good afternoon.

I am honored to have this opportunity to speak at the press conference of Taipei PLAS.

Advances in computer technology, information networking, and smart sensors have brought industrial production into the Industry 4.0 age. Machine tools are part of the trend. But other industrial machinery suppliers are also taking active steps to meet the enhanced requirements.

For plastics and rubber machinery, that means more than just improving on lean management and ERP (Enterprise Resource Planning). A host of needs also have to be met, including energy saving, carbon reduction, green energy, low noise, clean space, quick response, machine failure prediction, and lowered maintenance cost.

While addressing these needs, it is important for suppliers to stay on top of five major industry trends.

First, industrial IoT (Internet of Things). This technology is used to monitor plastics and feedstock systems, produce capacity data, display anomalies, carry out periodic maintenance, and predict the lifespan of key



components.

Second, CPS (cyber-physical systems). CPS can be put in place in areas such as design, products, maintenance education, peripherals integration management, and information feedback.

Third, AI (artificial intelligence). AI is applied to actively adjust various systems.

Fourth, Big data and cloud computing.

Last but not least, suppliers need to use VR/AR robotic arms, or even industrial robots to help customers improve manufacturing conditions and optimize benefits.

Fong Kee International Machinery has fully electric blow molding machines on show this year. This model has been developed to keep up with these trends. Please drop by our booth J0118 to have a look and give us some feedback.

We are all plastics and rubber machinery manufacturers in Taiwan. By continuing to innovate and improve, we can increase our competitive edge over global peers and explore business opportunities in major markets.

I wish you success in business and great health. Thank you.



**Remarks by Thomas HUANG**  
**Executive Director of Exhibition Department**  
**Taiwan External Trade Development Council**  
**(TAITRA)**

Convener Mr. Wei, President Wang, Chairman Wang, Vice Chairman Wang and Vice Chairman Hsieh, members of the media, good afternoon. On behalf of Taiwan External Trade Development Council (TAITRA), I would like to thank all of you for taking the time to participate in Taipei PLAS 2018 press conference.

First of all, since the first edition of Taipei PLAS in 1987, this year is now the show's 16th edition. We are especially grateful for the industry's enthusiastic support and the full cooperation of TAMI, which make Taipei PLAS's continued growth possible, in both show scale and importance.

Numbers speak for themselves. Let me share some numbers about this show with you. Firstly, Taiwan is the 6th largest producer and exporter of plastics and rubber machinery in the world. Taiwan's plastics and rubber machinery production output valued US\$1.4 billion and its export value reached US\$1.1 billion in 2017. The vigorous development of plastics and



rubber industry serves as a robust foundation for Taipei PLAS, making it the top 3 plastics and rubber trade show in Asia and the number 1 plastics and rubber trade show in Taiwan. This year, there are 497 local and overseas exhibitors using 2,586 booths, which exceed last edition's show scale. Other than local manufacturers, this is the show where more than 100 foreign firms from 22 countries, such as Austria, Germany, Italy, Ireland, U.S.A., Turkey, Japan, Korea and India, join to showcase their latest products. This year, foreign exhibitors use 416 booths, which grew 5.32% from last edition.

Being one of the organizers of Taipei PLAS, TAITRA has made great effort in helping firms expanding business in overseas market. We have mobilized our overseas offices around the world to promote the show and expect to invite 2,700 foreign exhibitors from over 80 countries, such as U.S.A., Mexico, Russia, Turkey, Egypt, Kenya, Japan, India, the Philippines, Indonesia, Malaysia, Thailand, Vietnam, China, etc., to come to visit the show. We will also host over 90 one-on-one procurement meetings where more than 30 buyers will meet with local exhibitors to explore business opportunities. Moreover, plastics and rubber associations and chambers of commerce from India, Turkey, Russia, and China will also lead delegations to visit the show. All these visits will enhance trade and global exchange of know-how and technology.



Above figures clearly illustrate that Taipei PLAS and Taiwan's plastics and rubber machinery industry has a prominent global position. Taiwan's plastics and rubber industry is so strong that it can continue to develop products to meet global market trends. For example, the industry has developed intelligent machines and production lines in line with the development trend of Industry 4.0, by combining robotic arms, data analysis, cloud computing, and Internet of Things. Also, the industry has created recycling machines and whole plant granulation equipment to recycle, clean and pulverize plastic waste and all-electric processing machines to meet the increasing demand for environmental protection.

This year, 5 theme routes— Auto Parts, 3C Products, Medical Equipment, Packaging, and Construction Materials— are to guide buyers to potential exhibitors and fulfill their purchasing needs more efficiently.

Moreover, we will host the Summit for the first time during this exhibition, to which we have invited experts and specialists from Austria-based Engel Holding GmbH and Wittmann Battenfeld GmbH, and Germany-based Arburg GmbH to discuss such topics as Industry 4.0 and smart manufacturing with our domestic high-level executives from Fu Chun Shin Machinery Manufacture Co., Ltd, Diing Kuen Plastic Machinery, Co., Ltd, Hiwin Technologies Corp. and Fong Kee International Machinery Co., Ltd. It is hoped to share the latest development and applications in the industry, so as to help firms to grasp the



future trends.

During the show, we will host the “Taiwan Plastics and Rubber Machine Awards for Excellence in Research and Innovation” and 27 seminars which are to cover the newest industry trends such as Industry 4.0, Strategies and Actions of Smart Machinery Industry Promotion, The Integration of Robotics to Realize Smart Manufacturing, and Smart Plastic Materials Technology. We believe that such diverse topics will inspire exchange of insights and new prospects across the industry.

The biennial Taipei PLAS is one of the leading professional plastics and rubber shows in Asia and is also the first choice for Taiwanese manufacturers to present their latest technology and machinery. It is also the place for international buyers to source “Made In Taiwan” products and total solutions. All visitors will be able to find what they need in these five days.

Lastly, thank you for coming to this press conference and your support for the trade show. Your support and feedback are always appreciated. Thank you. Wish you all good health, prosperity and happiness!



## Remarks by Mr. Alan WANG

### Chairman of Plastic & Rubber Machinery Committee of TAMI

Distinguished guests, friends from the media, ladies and gentlemen:  
good afternoon!

I am Alan Wang, Chair of the Plastics and Rubber Committee of TAMI (Taiwan Association of the Machinery Industry). It is my privilege to be here at the press conference of Taipei PLAS 2018, and to say a few words about innovations and highlights this year.

This is the 16th biennial exhibition, under the auspices of the Taiwan External Trade Development Council and TAMI. Each time, we have set the bar high for ourselves in order to ensure a highly rewarding experience for exhibitors at home and abroad. This year, over 2,700 booths are occupied—more than in 2016. As well as Taiwanese manufacturers, companies from Germany, Austria, Belgium, and Japan are taking part. This is indeed evidence that Taipei PLAS has remained a world-renowned exhibition despite fierce competition. This is all down to your hard work and participation. Thank you.

For the first time, we have teamed up with the Shoe Making Machinery



Committee, launching the Taipei International Shoe Making Technology Show 2018. This event, which coincides with Taipei PLAS, invites shoe-making players throughout the industry's value-chain to exhibit their products. It also serves as a platform for all to exchange ideas and share resources.

We continue to see Taiwanese manufacturers relocating back home, thanks to innovations in shoe-making machinery and processes, automation, and smart-manufacturing technology. We think it is a positive development. Through this trade show, we hope to make a difference and to help the Taiwanese shoe-making industry thrive further.

In recent years, the Industry 4.0 concept has evolved around utilizing IoT and other ICT technologies to make smart machinery, smart manufacturing, and smart service possible. In addition to the Smart Machinery Award in the Innovation Contest, this year's exhibition features the Automation Intelligence and Robot Show, where you will see advanced technologies, including integration of molding equipment, human-robot collaboration, automatic detection, automatic warehousing, and remote monitoring. Indeed, Taipei PLAS is an important stage on which manufacturers can showcase their smart-machinery strengths.

Food manufacturers will see faster and cleaner full-electric injection molding machines equipped with rapid IML technology. Hydraulic equipment operators will find Servo energy-saving molding systems that come with



optimized performance and improved efficiency. Shoe-making manufacturers who look to apply lightweight and environmentally friendly materials will see relevant molding solutions, such as MuCell. These machines go beyond energy-saving and high efficiency: They incorporate elements of smart machinery, smart service, and smart manufacturing. They are fully capable of meeting the demands of energy-saving and the Industry 4.0 initiative in our sector. Please take your time to visit the booths; we welcome your feedback.

Again, I would like to say thank you to TAITRA, TAMI, and every one of you for your contributions to Taipei PLAS 2018. I wish the exhibition a great success and all participants a fruitful experience. Thank you.



**Remarks by Mr. Michael WANG**  
**Vice Chairman of Plastic & Rubber Machinery**  
**Committee of TAMI**

Distinguished guests, friends from the media, ladies and gentlemen: a very warm welcome to all of you!

It has been two years since the last Taipei PLAS. Thank you for your interest in Taiwan's plastics and rubber industry, and in keeping up-to-date with the latest developments. I would also like to take this opportunity to extend my appreciation to Chair Ke of TAMI (Taiwan Association of Machinery Industry) and to the Taiwan External Trade Development Council for making this exhibition a reality.

For years, Taiwan's plastics and rubber machinery industry has been a significant player in the global market, with its reliable product quality, advanced technology, and responsive service. This high-value offering means that Taiwan has been the go-to destination for international buyers. However, Taiwan has been faced with various economic challenges, given today's political and economic climate in the world. A weak Taiwan dollar does not help, either. As a result, many suppliers are not generating enough profits from their quality products to invest in developing high-end models. To



carve out a better and more sustainable future for the industry, Chair Ke has continued to communicate and coordinate with the government. I would like to take this opportunity to specially thank Chair Ke for his efforts. Thank you.

We have now come to the age of Industry 4.0, IoT, smart machinery, and smart manufacturing. We are also increasingly environment-conscious, thanks to Paris Agreement goals and global carbon-reduction standards. To meet the two objectives, all manufacturers of injection molding machinery are taking steps to develop energy-saving and high-efficiency models. We at Chen Hsong are no exception. We will be showcasing full-electric injection molding machines and high-efficiency packaging machines. These are models created with the environment in mind.

We will continue to invest in advanced technology, which has been our competitive edge. With AI emerging to become a disruptive force in the industry, we pride ourselves on spotting its potential early, and we are now working on fostering a “smart assembly chain” for the industry as a whole. We are also taking advantage of AI to provide customers with faster and more tailored services.

This year marks the 60th anniversary for Chen Hsong, which was founded in 1958 by Dr. Chen Chiang. Over the decades, his forward-looking leadership has led us to overcome various challenges. By persevering and working hard together, we have remained a leader in the machine industry for



plastic injection molding.

Dr. Chiang has recently retired, handing the baton to Lai-Yuen Chiang. Under her leadership, Chen Hsong sets out a new vision and values that will inject youthful energy and vibrancy into the company. Going forward, we will continue to lead the industry with an even stronger drive.

This year, we have four advanced models on show. Please stop by our booth and check them out. Your feedback is always welcome.

Finally, I wish the 2018 exhibition a great success. Thank you.



**Remarks by Mr. Bush HSIEH**  
**Vice Chairman of Plastic & Rubber Machinery**  
**Committee of TAMI**

Distinguished guests, friends, ladies and gentlemen,

I am honored to be given this opportunity to say a few words at Taipei PLAS 2018. Cohosted by Taiwan External Trade Development Council and Taiwan Association of Machinery Industry, the show will run for five days from August 15 through 19 in Taipei Nangang Exhibition Center.

This biennial show is one of the most important events in the plastics and rubber machinery industry. Each time we have seen a large number of participants, including manufacturers, potential customers, and trading companies. It is a great opportunity for those looking to expand business at home and abroad and to keep up with the latest trends in technology.

Taiwan is one of the world's major producer of plastics and rubber machinery. And Taipei PLAS is one of top three plastics and rubber machinery shows in Asia. It has always been an important platform for all parties to keep current, to source machinery, and to exchange ideas about innovations, technology, and products.

The Industry 4.0 trend means plastics and rubber machinery is upgrading



in terms of Internet of Machines, big data, virtual metrology, machine self-diagnostics/ predictive maintenance, and AI.

Given Taiwan's strength in information and communications technology (ICT), a number of Taiwanese plastics and rubber machinery suppliers are working to incorporate this advantage in their products. The goal is to create a business model consistent with the ideas of Industry 4.0 and service-oriented manufacturing.

In Taipei PLAS 2018, you can expect to see many examples of companies adopting Industry 4.0 standards. Here, you can see first-hand that smart machinery and smart manufacturing are shaping our future.

My company, Chumpower, will be showcasing PET blow molding machines that incorporate smart machine and IoM technologies. Please visit us and your feedback is always appreciated.

Finally, I'd like to thank you again for coming to this event. On behalf of Taiwan Association of Machinery Industry, I wish Taipei PLAS 2018 a great success and all of you a rewarding experience. Thank you.



## **Remarks by Mr. C. C. WANG**

### **President of TAMI**

## **Overview of Plastics & Rubber Machinery Industry**

Overview of Global Plastics & Rubber Machinery Trade

Mr. Cheng-Ching WANG, TAMI Secretary-General

Some of the most important countries in the global plastics and rubber machinery market include Germany, China, Japan, Italy, the US, Taiwan, and South Korea. Germany is the biggest producer and exporter, while China is the biggest importer and consumer. Japan, Italy, the US, Taiwan, and South Korea are also important exporters.

In 2017, Germany, China, Japan, Italy, the US, and Taiwan together exported US\$17.8 billion worth of plastics and rubber machinery, approximately 90% of global exports, which are estimated at US\$20 billion. Among other key players were South Korea, Switzerland, Austria, Canada, France, the UK, and India.

In 2017, Germany exported US\$6.0 billion worth of plastics and rubber machinery, China US\$4.05 billion, Japan US\$2.56 billion, Italy US\$2.38 billion, the US US\$1.61 billion, and Taiwan US\$1.16 billion. Their total exports



were up US\$650 million, or 3.8%, from the 2014 peak. Table 1 shows the breakdown of exports by country.

**Table 1: Breakdown of Plastics and Rubber Machinery  
Exports by Country**

US\$ million

| Rank | Country | 2013   | 2014   | 2015   | 2016   |        | 2017   |        | YoY<br>change<br>(2016-17) |
|------|---------|--------|--------|--------|--------|--------|--------|--------|----------------------------|
|      |         |        |        |        | Value  | Share  | Value  | Share  |                            |
|      | Total   | 16,875 | 17,126 | 15,741 | 15,909 | 100.0% | 17,779 | 100.0% | 11.8%                      |
| 1    | Germany | 6,212  | 6,164  | 5,236  | 5,479  | 34.3%  | 6,003  | 33.8%  | 9.6%                       |
| 2    | China   | 3,074  | 3,307  | 3,517  | 3,514  | 22.1%  | 4,050  | 22.8%  | 15.3%                      |
| 3    | Japan   | 2,482  | 2,325  | 2,116  | 2,139  | 13.5%  | 2,563  | 14.4%  | 19.9%                      |
| 4    | Italy   | 2,271  | 2,327  | 2,140  | 2,119  | 13.4%  | 2,383  | 13.4%  | 12.5%                      |
| 5    | The US  | 1,571  | 1,746  | 1,610  | 1,626  | 10.2%  | 1,617  | 9.1%   | -0.5%                      |
| 6    | Taiwan  | 1,265  | 1,257  | 1,122  | 1,032  | 6.5%   | 1,163  | 6.5%   | 12.8%                      |

## 1. Germany

Germany is the biggest producer and exporter of plastics and rubber machinery in the world, accounting for around 30% of the global trade value. Germany exported US\$6.0 billion worth of plastics and rubber machinery in 2017, up 9.6% YoY but down 3.3% from the 2013 peak. The export value put Germany far ahead of second-placed China.



By export destination, the US claimed the top spot in 2017 with an export value of US\$960 million (16% of total exports), up 12.8% YoY, followed by China with an export value of US\$815 million (13.6% of total exports), up 18.2%, and Mexico with an export value of US\$302 million (5.0% of total exports), up 6.3% YoY.

Others include Italy (4.6% of total exports), up 32.3% YoY; Poland (4.4% of total exports), up 11.4% YoY; France (3.6% of total exports), down 1.7% YoY. India (3.3% of total exports), down 0.8% YoY; the Czech Republic (3.1% of total exports), up 2.4% YoY; the UK (2.7% of total exports); and Spain (2.6% of total exports). Table 2 shows the breakdown of Germany's exports in recent years.



**Table 2: Germany's Plastics and Rubber Machinery Exports**

US\$1,000

| Rank | Country            | 2016             | 2017年            |               | YoY Change  |
|------|--------------------|------------------|------------------|---------------|-------------|
|      |                    |                  | Value            | Share         |             |
|      | <b>Total</b>       | <b>5,479,762</b> | <b>6,003,400</b> | <b>100.0%</b> | <b>9.6%</b> |
| 1    | The US             | 850,917          | 959,762          | 16.0%         | 12.8%       |
| 2    | China              | 689,992          | 815,512          | 13.6%         | 18.2%       |
| 3    | Mexico             | 285,005          | 302,978          | 5.0%          | 6.3%        |
| 4    | Italy              | 208,818          | 276,252          | 4.6%          | 32.3%       |
| 5    | Poland             | 235,815          | 262,598          | 4.4%          | 11.4%       |
| 6    | France             | 217,381          | 213,739          | 3.6%          | -1.7%       |
| 7    | India              | 197,512          | 196,000          | 3.3%          | -0.8%       |
| 8    | The Czech Republic | 180,067          | 184,362          | 3.1%          | 2.4%        |
| 9    | The UK             | 156,813          | 162,717          | 2.7%          | 3.8%        |
| 10   | Spain              | 151,505          | 154,654          | 2.6%          | 2.1%        |

Source: German customs statistics



## 2. China

China has emerged as the world's biggest producer, importer, and buyer of plastics and rubber machinery. In fact, it is now the second largest exporter globally, second only to Germany. China exported US\$4.05 billion worth of plastics and rubber machinery in 2017, up 15.3% YoY, significantly overtaking previous export heavyweights such as Japan and Italy. Most of China's exports were likely aimed at the mid- and low-end market segments.

By export destination, the US claimed the top spot in 2017 with an export value of US\$419 million (10.4% of total exports), up 58.4% YoY, followed by Vietnam with an export value of US\$375 million (9.3% of total exports), up 24.6% YoY, and India with an export value of US\$252 million (6.2% of total exports), down 0.9% YoY.

Others include Thailand (6.1% of total exports), up 5.9% YoY; Japan (4.4% of total exports), up 10.9%; Indonesia (3.8% of total exports), down 17.3% YoY; Mexico (3.8%); Turkey (3.6%); Malaysia (3.1%); and South Korea (3.0%). The top 10 destinations together made up 53% of China's plastics and rubber machinery exports, as its export market was not highly concentrated. Table 3 shows the breakdown of China's exports.



**Table 3: China's Plastics and Rubber Machinery Exports**

US\$1,000

| Rank | Country      | 2016             | 2017年            |               | YoY Change   |
|------|--------------|------------------|------------------|---------------|--------------|
|      |              |                  | Value            | Share         |              |
|      | <b>Total</b> | <b>3,513,522</b> | <b>4,050,685</b> | <b>100.0%</b> | <b>15.3%</b> |
| 1    | The US       | 264,891          | 419,717          | 10.4%         | 58.4%        |
| 2    | Vietnam      | 301,468          | 375,534          | 9.3%          | 24.6%        |
| 3    | India        | 255,119          | 252,874          | 6.2%          | -0.9%        |
| 4    | Thailand     | 233,127          | 246,931          | 6.1%          | 5.9%         |
| 5    | Japan        | 162,374          | 180,037          | 4.4%          | 10.9%        |
| 6    | Indonesia    | 186,576          | 154,349          | 3.8%          | -17.3%       |
| 7    | Mexico       | 116,999          | 151,963          | 3.8%          | 29.9%        |
| 8    | Turkey       | 124,765          | 143,809          | 3.6%          | 15.3%        |
| 9    | Malaysia     | 84,953           | 126,721          | 3.1%          | 49.2%        |
| 10   | Korea        | 117,805          | 123,156          | 3.0%          | 4.5%         |

Source: Chinese customs statistics



### 3. Japan

Japan is one of the most important producers and exporters of plastics and rubber machinery in Asia. Its industry was unrivaled more than twenty years ago but has come under pressure in recent years due to fierce competition from Taiwan, South Korea, and China.

Japan exported US\$2.56 billion worth of plastics and rubber machinery in 2017, up 19.9%, to the world's third largest exporter.

By export destination, China claimed the top spot in 2017 with an export value of US\$902 million (35.2% of total exports), up 48.4% YoY, followed by the US with an export value of US\$337 million (13.2% of total exports), down 13.5% YoY, and South Korea with an export value of US\$215 million, up 46.8% YoY.

Others include Thailand (5.5% of total exports), up 9.7% YoY; Taiwan (4.2% of total exports), up 68.6% YoY; Vietnam (4.0% of total exports), up 25.1% YoY; Mexico (3.3% of total exports), up 6.6% YoY; India (2.9%); Indonesia (2.7%); and Malaysia (2.6%). The top 10 destinations together made up 80% of Japan's plastics and rubber machinery exports. Table 4 shows the breakdown of Japan's exports.



**Table 4: Japan's Plastics and Rubber Machinery Exports**

US\$1,000

| Rank | Country      | 2016             | 2017年            |               | YoY Change   |
|------|--------------|------------------|------------------|---------------|--------------|
|      |              |                  | Value            | Share         |              |
|      | <b>Total</b> | <b>2,138,536</b> | <b>2,563,390</b> | <b>100.0%</b> | <b>19.9%</b> |
| 1    | China        | 608,299          | 902,455          | 35.2%         | 48.4%        |
| 2    | The US       | 389,758          | 337,217          | 13.2%         | -13.5%       |
| 3    | South Korea  | 147,000          | 215,805          | 8.4%          | 46.8%        |
| 4    | Thailand     | 129,130          | 141,595          | 5.5%          | 9.7%         |
| 5    | Taiwan       | 63,584           | 107,216          | 4.2%          | 68.6%        |
| 6    | Vietnam      | 80,981           | 101,327          | 4.0%          | 25.1%        |
| 7    | Mexico       | 79,009           | 84,210           | 3.3%          | 6.6%         |
| 8    | India        | 63,854           | 74,296           | 2.9%          | 16.4%        |
| 9    | Indonesia    | 80,554           | 68,393           | 2.7%          | -15.1%       |
| 10   | Malaysia     | 52,283           | 67,657           | 2.6%          | 29.4%        |

Source: Japanese customs statistics



## 4. Italy

Italy is also an important producer and exporter of plastics and rubber machinery and was once second only to Germany. A stronger euro against the US dollar has undermined the country's competitiveness as an exporter over the past few years, but the current euro weakness has been helpful. Italy exported US\$2.38 billion worth of plastics and rubber machinery in 2017, up 12.5%, to be the world's fourth-largest exporter, after Germany, China, and Japan.

By export destination, the US claimed the top spot in 2017 with an export value of US\$222 million (9.3% of total exports), up 20.5% YoY, followed by Germany with an export value of US\$185 million (7.8% of total exports), up 18.9% YoY, and France with an export value of US\$125 million (5.3% of total exports), up 30.7% YoY.

Others include Spain (5.1% of total exports), up 14.0% YoY; China (5.1% of total exports), up 4.9% YoY; Mexico (5.1% of total exports), down 14.8% YoY; Poland (4.5% of total exports), up 18.1% YoY; the UK (4.0%); Romania (3.2%); and Turkey (3.1%). The top 10 destinations together made up 53% of Italy's plastics and rubber machinery exports. Table 5 shows the breakdown of Italy's exports.



**Table 5: Italy's Plastics and Rubber Machinery Exports**

US\$1,000

| Rank | Country      | 2016             | 2017年            |               | YoY Change   |
|------|--------------|------------------|------------------|---------------|--------------|
|      |              |                  | Value            | Share         |              |
|      | <b>Total</b> | <b>2,119,059</b> | <b>2,383,645</b> | <b>100.0%</b> | <b>12.5%</b> |
| 1    | The US       | 184,307          | 222,056          | 9.3%          | 20.5%        |
| 2    | Germany      | 155,629          | 185,029          | 7.8%          | 18.9%        |
| 3    | France       | 96,198           | 125,691          | 5.3%          | 30.7%        |
| 4    | Spain        | 106,704          | 121,603          | 5.1%          | 14.0%        |
| 5    | China        | 115,266          | 120,921          | 5.1%          | 4.9%         |
| 6    | Mexico       | 141,376          | 120,382          | 5.1%          | -14.8%       |
| 7    | Poland       | 90,603           | 107,045          | 4.5%          | 18.1%        |
| 8    | The UK       | 82,575           | 94,155           | 4.0%          | 14.0%        |
| 9    | Romania      | 46,256           | 76,332           | 3.2%          | 65.0%        |
| 10   | Turkey       | 78,629           | 73,713           | 3.1%          | -6.3%        |

Source: Italian customs statistics



## 5. The US

As well as Europe and Asia, the US plays a significant role as a producer and exporter of plastics and rubber machinery. The US exported US\$1.61 billion worth of plastics and rubber machinery in 2017, down 0.5% YoY, to be the world's fifth largest exporter.

By export destination, Mexico claimed the top spot in 2017 with an export value of US\$402 million (24.9% of total exports), up 0.5% YoY, followed by Canada with an export value of US\$291 million (18.0% of total exports), down 5.1% YoY, and Germany with an export value of US\$167 million (10.4% of total exports), up 2.2% YoY.

Others include China (8.7% of total exports), up 56.2% YoY; the UK (2.5% of total exports), up 6.6% YoY; India (2.5% of total exports), up 22.9% YoY; Japan (2.3%); Hong Kong (1.9%); Thailand (1.7%); and Brazil (1.6%). The top 10 destinations together made up 75% of the US's plastics and rubber machinery exports. Table 6 shows the breakdown of the US's exports.



**Table 6: The US's Plastics and Rubber Machinery Exports**

US\$1,000

| Rank | Country      | 2016             | 2017年            |               | YoY Change   |
|------|--------------|------------------|------------------|---------------|--------------|
|      |              |                  | Value            | Share         |              |
|      | <b>Total</b> | <b>1,625,906</b> | <b>1,617,607</b> | <b>100.0%</b> | <b>-0.5%</b> |
| 1    | Mexico       | 400,671          | 402,611          | 24.9%         | 0.5%         |
| 2    | Canada       | 307,494          | 291,959          | 18.0%         | -5.1%        |
| 3    | Germany      | 164,190          | 167,723          | 10.4%         | 2.2%         |
| 4    | China        | 89,960           | 140,538          | 8.7%          | 56.2%        |
| 5    | The UK       | 37,908           | 40,403           | 2.5%          | 6.6%         |
| 6    | India        | 32,834           | 40,364           | 2.5%          | 22.9%        |
| 7    | Japan        | 30,854           | 36,553           | 2.3%          | 18.5%        |
| 8    | Hong Kong    | 24,051           | 31,335           | 1.9%          | 30.3%        |
| 9    | Thailand     | 20,836           | 28,090           | 1.7%          | 34.8%        |
| 10   | Brazil       | 23,388           | 26,292           | 1.6%          | 12.4%        |

Source: US customs statistics



## 6. Taiwan

As an important producer and exporter of plastics and rubber machinery in the world, Taiwan is well-represented in major trade shows, such as Germany's K Trade Fair, China's Chinaplas, Japan's IPF, the US's NPE, and Italy's PLAST. Taiwan's own trade show, TAIPEI PLAS, is also a world-class plastics and rubber machinery exhibition. Taiwan exported US\$1.16 billion worth of plastics and rubber machinery in 2017, up 12.8%, to be the world's sixth largest exporter.

By export destination, China claimed the top spot in 2017 with an export value of US\$247 million (21.3%% of total exports), up 27.0% YoY, followed by Vietnam with an export value of US\$139 million (12.0% of total exports), up 2.3% YoY, and India with an export value of US\$9.17 million (7.9% of total exports), up 44.1% YoY.

Others include Indonesia (7.7% of total exports), up 25.8% YoY; Thailand (6.6% of total exports), up 20.4% YoY; Japan (4.9% of total exports), up 18.3% YoY; the US (4.7%); Malaysia (2.9%); Mexico (2.4%); and Turkey (1.9%). The top 10 destinations together made up 73% of Taiwan's plastics and rubber machinery exports. Table 7 shows the breakdown of Taiwan's exports.



**Table 7: Taiwan's Plastics and Rubber Machinery Exports**

US\$1,000

| Rank | Country      | 2016             | 2017年            |               | YoY Change   |
|------|--------------|------------------|------------------|---------------|--------------|
|      |              |                  | Value            | Share         |              |
|      | <b>Total</b> | <b>1,032,302</b> | <b>1,163,938</b> | <b>100.0%</b> | <b>12.8%</b> |
| 1    | China        | 195,034          | 247,618          | 21.3%         | 27.0%        |
| 2    | Vietnam      | 136,337          | 139,504          | 12.0%         | 2.3%         |
| 3    | India        | 63,648           | 91,699           | 7.9%          | 44.1%        |
| 4    | Indonesia    | 70,944           | 89,253           | 7.7%          | 25.8%        |
| 5    | Thailand     | 63,898           | 76,920           | 6.6%          | 20.4%        |
| 6    | Japan        | 48,056           | 56,873           | 4.9%          | 18.3%        |
| 7    | USA          | 56,724           | 54,986           | 4.7%          | -3.1%        |
| 8    | Malaysia     | 28,702           | 34,281           | 2.9%          | 19.4%        |
| 9    | Mexico       | 24,220           | 28,428           | 2.4%          | 17.4%        |
| 10   | Turkey       | 25,243           | 21,679           | 1.9%          | -14.1%       |

Source: Taiwanese customs statistics



## **7. Overview of China's Plastics and Rubber Machinery**

### **Production and Sales**

China has emerged as the world's largest producer, importer, and consumer of plastics and rubber machinery. In 2017, by estimation it registered an output value of over US\$10 billion, an export value of US\$4 billion (second only to Germany), and an import value of US\$2.95 billion. In addition, China represented a market value of over US\$9.5 billion, equivalent to the combined value of second-placed to six-placed markets.

In 2017, China imported US\$2.96 billion worth of plastics and rubber machinery, up 29.8% YoY. By import source, Japan was the largest contributor with an import value of US\$1.08 billion (36.6% of all imports), up 36.9% YoY, followed by Germany with an import value of US\$766 million (25.9% of imports), up 16.6% YoY, and Taiwan with an import value of US\$224 million (7.6% of imports), up 13.5% YoY.

Others include South Korea (7.0% of total imports), up 65.4% YoY; the US (4.4% of total imports), up 32.8% YoY; Italy (4.0% of total imports), up 4.1% YoY; Austria (2.9%); France (2.4%); Switzerland (1.7%); and the Netherlands (1.2%). The top 10 import sources together represented 94% of China's plastics and rubber machinery imports. Table 8 shows the breakdown of China's imports.



China's imports are predominantly from Asia (Japan, Taiwan, and South Korea), Western Europe, and the US. The three major import sources also represent the world's most important regions for manufacturing plastics and rubber machinery, i.e. Western Europe, Northeast Asia, and North America.

**Table 8: China's Plastics and Rubber Machinery Imports**

US\$1,000

| Rank | Country         | 2016             | 2017年            |               | YoY Change   |
|------|-----------------|------------------|------------------|---------------|--------------|
|      |                 |                  | Value            | Share         |              |
|      | <b>Total</b>    | <b>2,279,958</b> | <b>2,959,263</b> | <b>100.0%</b> | <b>29.8%</b> |
| 1    | Japan           | 790,659          | 1,082,477        | 36.6%         | 36.9%        |
| 2    | Germany         | 657,734          | 766,986          | 25.9%         | 16.6%        |
| 3    | Taiwan          | 197,415          | 224,022          | 7.6%          | 13.5%        |
| 4    | Korea           | 125,962          | 208,332          | 7.0%          | 65.4%        |
| 5    | The US          | 98,943           | 131,370          | 4.4%          | 32.8%        |
| 6    | Italy           | 112,897          | 117,480          | 4.0%          | 4.1%         |
| 7    | Austria         | 62,727           | 84,966           | 2.9%          | 35.5%        |
| 8    | France          | 32,432           | 69,588           | 2.4%          | 114.6%       |
| 9    | Switzerland     | 25,209           | 50,340           | 1.7%          | 99.7%        |
| 10   | The Netherlands | 28,863           | 36,038           | 1.2%          | 24.9%        |

Source: Chinese customs statistics



## **8. Overview of Major Plastics and Rubber Machinery**

### **Importers**

The global plastics and rubber machinery market is tilted toward the mid- and low-end, a market segment where China will have a superior competitive edge. Taiwan will need to move higher-end, where Japan and Italy will be competitors, and embrace the Industry 4.0 initiative, with an emphasis on automation, customization, and smart machinery.

Among the world's major plastics and rubber machinery importers are China, Russia, India, Thailand, and Turkey. A look at their imports in recent years will provide insights into supply/demand dynamics.

China has been the world's biggest plastics and rubber machinery importer. Its import value was US\$3.71 billion in 2014 (the highest in recent years), US\$2.51 billion in 2015 (down 32.4%), US\$2.28 billion in 2016 (the lowest in recent years; down 38% from the 2014 peak). The import value surged to US\$2.96 billion in 2017, driven by improving market demand and import substitution in the mid- and low-end market. Going forward, China's demand for mid- and low-end imports will likely fall further.

India's imports have continued to grow rapidly in recent years. Its import value was US\$680 million in 2014, US\$737 million in 2015, US\$874 million in 2016, and US\$978 million in 2017 (up 43.8% from 2014).

Thailand's imports have been volatile in recent years. Its import value



was US\$681 million in 2014, US\$819 million in 2015, US\$629 million in 2016, US\$626 million in 2017 (down 23.5% from the 2015 peak). The sharp downtrend was the result of weakening market demand.

**Table 9: Breakdown of Plastics and Rubber Machinery Imports by Country**

|          |       |       |       |       | US\$ million         |
|----------|-------|-------|-------|-------|----------------------|
| Country  | 2014  | 2015  | 2016  | 2017  | YoY change (2016-17) |
| China    | 3,715 | 2,510 | 2,280 | 2,959 | 29.8%                |
| Russia   |       |       | 453   | 1,001 | 120.8%               |
| India    | 680   | 737   | 874   | 978   | 12.0%                |
| Thailand | 681   | 819   | 629   | 626   | -0.4%                |
| Turkey   |       |       | 580   | 584   | 0.6%                 |



## **(1) China's Plastics and Rubber Machinery Imports**

China's the world's largest plastics and rubber machinery importer, though its import value has been declining over the last few years due to weak market demand and import substitution. Its import value was US\$2.96 billion in 2017, up 29.8% YoY. By import source, Japan claimed the top spot with an import value of US\$1.08 billion (36.6% of total imports), up 36.9% YoY, followed by Germany with an import value of US\$766 million (25.9% of total exports), up 16.6% YoY, and Taiwan with an import value of US\$224 million (7.6% of total exports), up 13.5% YoY.

## **(2) India's Plastics and Rubber Machinery Imports**

India is also a plastics and rubber machinery heavyweight. Its imports have continued to grow in recent years as economic growth has boosted demand and encouraged machinery investment. Its import value was US\$978 million in 2017, up 12.0% YoY. By import source, China claimed the top spot with an import value of US\$262 million (26.8% of total imports), up 0.9% YoY, followed by Germany with an import value of US\$229 million (23.5% of total imports), up 1.4% YoY, and Japan with an import value of US\$94.0 million (9.6% of total imports), up 31.3% YoY.

Others include Taiwan with an import value of US\$93.21 million (9.5% of total imports), up 62.7% YoY; Italy with an import value of US\$78.27 million (8.0% of total imports), up 41.5% YoY; the US (4.8% of total imports), up



27.7% YoY; South Korea (3.1% of total imports), up 28.4% YoY; Switzerland (1.9% of total imports), down 8.8% YoY; France (1.6% of imports), up 92.3% YoY; and the UK (1.3% of total imports), up 2.1% YoY. Table 10 shows the breakdown of India's exports.

**Table 10: Breakdown of India's Plastics and Rubber Machinery Imports**

US\$1,000

| Rank | Country      | 2016           | 2017年          |               | YoY Change   |
|------|--------------|----------------|----------------|---------------|--------------|
|      |              |                | Value          | Share         |              |
|      | <b>Total</b> | <b>874,061</b> | <b>978,733</b> | <b>100.0%</b> | <b>12.0%</b> |
| 1    | China        | 259,815        | 262,207        | 26.8%         | 0.9%         |
| 2    | Germany      | 226,362        | 229,525        | 23.5%         | 1.4%         |
| 3    | Japan        | 71,589         | 94,024         | 9.6%          | 31.3%        |
| 4    | Taiwan       | 57,287         | 93,211         | 9.5%          | 62.7%        |
| 5    | Italy        | 55,325         | 78,273         | 8.0%          | 41.5%        |
| 6    | The US       | 36,808         | 46,988         | 4.8%          | 27.7%        |
| 7    | South Korea  | 23,330         | 29,960         | 3.1%          | 28.4%        |
| 8    | Switzerland  | 20,854         | 19,020         | 1.9%          | -8.8%        |
| 9    | France       | 8,299          | 15,958         | 1.6%          | 92.3%        |
| 10   | The UK       | 12,515         | 12,783         | 1.3%          | 2.1%         |

Source: Chinese customs statistics



### **(3) Thailand's Plastics and Rubber Machinery Imports**

In recent years, Thailand has experienced sharp fluctuations in plastics and rubber machinery imports as a result of slow economic growth. Its import value was US\$626 million in 2017, down 0.4%. By import source, China claimed the top spot with an import value of US\$230 million (36.8% of total imports), up 3.1% YoY, followed by Japan with an import value of US\$132 million (21.1% of total imports), down 4.5% YoY, and Taiwan with an import value of US\$70.32 million (11.2% of total imports), up 23.6% YoY.

Others include Germany with an import value of US\$52.02 million (8.3% of total imports), down 19.6% YoY; the US with an import value of US\$21.84 million (3.5% of total imports), up 88.8% YoY; and South Korea with an import value of US\$18.36 million (2.9% of total imports), down 38.7% YoY. Table 11 shows the breakdown of Thailand's exports.



**Table 11: Breakdown of Thailand' s Plastics and Rubber Machinery Imports**

US\$1,000

| Rank | Country      | 2016           | 2017年          |               | YoY Change   |
|------|--------------|----------------|----------------|---------------|--------------|
|      |              |                | Value          | Share         |              |
|      | <b>Total</b> | <b>629,346</b> | <b>626,642</b> | <b>100.0%</b> | <b>-0.4%</b> |
| 1    | China        | 223,696        | 230,646        | 36.8%         | 3.1%         |
| 2    | Japan        | 138,337        | 132,145        | 21.1%         | -4.5%        |
| 3    | Taiwan       | 56,887         | 70,324         | 11.2%         | 23.6%        |
| 4    | Germany      | 64,737         | 52,025         | 8.3%          | -19.6%       |
| 5    | The US       | 11,569         | 21,845         | 3.5%          | 88.8%        |
| 6    | South Korea  | 29,949         | 18,366         | 2.9%          | -38.7%       |
| 7    | Italy        | 14,694         | 15,219         | 2.4%          | 3.6%         |
| 8    | France       | 10,409         | 11,748         | 1.9%          | 12.9%        |
| 9    | Malaysia     | 10,133         | 11,359         | 1.8%          | 12.1%        |
| 10   | Austria      | 4,020          | 10,815         | 1.7%          | 169.0%       |

Source: Thai customs statistics



## Table(I) 2005~2017 Production, Exports, Imports and Demand for Taiwan Plastics and Rubber Machinery

Unit: Million NT\$

| Year | Firm | Employees | Plastics & Rubber Machinery Production |         | Plastics & Rubber Machinery Exports |         | Plastics & Rubber Machinery Imports |        | Plastics & Rubber Machinery Demand |        | Export Rate(%) | Foreign Rate(%) | Domestic Rate(%) |
|------|------|-----------|--|---------|-------------------------------------|---------|-------------------------------------|--------|------------------------------------|--------|----------------|-----------------|------------------|
|      |      |           | Value                                  | Ton     | Value                               | Ton     | Value                               | Ton    | Value                              | Ton    |                |                 |                  |
| 2005 | 250  | 8,300     | 37,200                                 | 193,400 | 30,448                              | 158,637 | 9,690                               | 32,603 | 16,442                             | 67,366 | 81.8%          | 58.9%           | 41.1%            |
| 2006 |      |           | 37,300                                 | 185,800 | 30,528                              | 152,039 | 11,464                              | 35,916 | 18,236                             | 69,677 | 81.8%          | 62.9%           | 37.1%            |
| 2007 |      |           | 40,200                                 | 200,600 | 32,910                              | 164,340 | 10,220                              | 41,868 | 17,510                             | 78,128 | 81.9%          | 58.4%           | 41.6%            |
| 2008 |      |           | 41,500                                 | 182,700 | 33,950                              | 149,490 | 10,161                              | 39,448 | 17,711                             | 72,658 | 81.8%          | 57.4%           | 42.6%            |
| 2009 |      |           | 30,000                                 | 128,700 | 24,608                              | 105,545 | 5,451                               | 19,802 | 10,843                             | 42,957 | 82.0%          | 50.3%           | 49.7%            |
| 2010 | 280  | 8,800     | 45,000                                 | 203,597 | 36,901                              | 166,950 | 9,036                               | 38,212 | 17,135                             | 74,859 | 82.0%          | 52.7%           | 47.3%            |
| 2011 |      |           | 47,900                                 | 204,890 | 39,285                              | 168,011 | 11,732                              | 38,779 | 20,347                             | 75,658 | 82.0%          | 57.7%           | 42.3%            |
| 2012 |      |           | 48,650                                 | 181,200 | 39,884                              | 148,611 | 9,207                               | 30,037 | 17,973                             | 62,626 | 82.0%          | 51.2%           | 48.8%            |
| 2013 |      |           | 45,690                                 | 164,100 | 37,462                              | 134,630 | 7,685                               | 26,448 | 15,913                             | 55,918 | 82.0%          | 48.3%           | 51.7%            |
| 2014 |      |           | 46,380                                 | 173,200 | 38,036                              | 142,041 | 8,312                               | 29,400 | 16,656                             | 60,559 | 82.0%          | 49.9%           | 50.1%            |
| 2015 |      |           | 43,320                                 | 158,700 | 35,520                              | 130,185 | 7,167                               | 25,304 | 14,967                             | 53,819 | 82.0%          | 47.9%           | 52.1%            |
| 2016 | 280  | 8,500     | 40,590                                 | 151,260 | 33,280                              | 124,035 | 9,160                               | 26,073 | 16,470                             | 53,298 | 82.0%          | 55.6%           | 44.4%            |
| 2017 |      |           | 43,190                                 | 158,770 | 35,418                              | 130,196 | 9,396                               | 30,977 | 17,168                             | 59,551 | 82.0%          | 54.7%           | 45.3%            |

US\$=32.08NT\$(2005)

US\$=32.503NT\$(2006)

US\$=32.785NT\$(2007)

US\$=31.38NT\$(2008)

US\$=32.96NT\$(2009)

US\$=31.50NT\$(2010)

US\$=29.33 NT\$(2011)

US\$=29.56 NT\$(2012)

US\$=29.61 NT\$(2013)

US\$=30.26 NT\$(2014)

US\$=31.66 NT\$(2015)

US\$=32.24 NT\$(2016)

US\$=30.43 NT\$(2017)

Tabulator : TAMI



**Table(2) Exports of Taiwan Plastics and Rubber Machinery in 2017  
by Destination**

(Unit) : US\$1,000

| 2017<br>Rank | Country      | 2016             |               | 2017             |               | 17/16<br>Change% |
|--------------|--------------|------------------|---------------|------------------|---------------|------------------|
|              |              | Value            | %             | Value            | %             |                  |
| 1            | China        | 195,034          | 18.9%         | 247,618          | 21.3%         | 27.0%            |
| 2            | Vietnam      | 136,337          | 13.2%         | 139,504          | 12.0%         | 2.3%             |
| 3            | India        | 63,648           | 6.2%          | 91,699           | 7.9%          | 44.1%            |
| 4            | Indonesia    | 70,944           | 6.9%          | 89,253           | 7.7%          | 25.8%            |
| 5            | Thailand     | 63,898           | 6.2%          | 76,920           | 6.6%          | 20.4%            |
| 6            | Japan        | 48,056           | 4.7%          | 56,873           | 4.9%          | 18.3%            |
| 7            | USA          | 56,724           | 5.5%          | 54,986           | 4.7%          | -3.1%            |
| 8            | Malaysia     | 28,702           | 2.8%          | 34,281           | 2.9%          | 19.4%            |
| 9            | Mexico       | 24,220           | 2.3%          | 28,428           | 2.4%          | 17.4%            |
| 10           | Turkey       | 25,243           | 2.4%          | 21,679           | 1.9%          | -14.1%           |
| 11           | Philippines  | 19,882           | 1.9%          | 20,550           | 1.8%          | 3.4%             |
| 12           | Russia       | 15,615           | 1.5%          | 16,801           | 1.4%          | 7.6%             |
| 13           | Pakistan     | 9,954            | 1.0%          | 12,891           | 1.1%          | 29.5%            |
| 14           | Hong Kong    | 9,952            | 1.0%          | 11,323           | 1.0%          | 13.8%            |
| 15           | Bangladesh   | 16,204           | 1.6%          | 10,750           | 0.9%          | -33.7%           |
| 16           | Myanmar      | 5,033            | 0.5%          | 10,636           | 0.9%          | 111.3%           |
| 17           | Saudi Arabia | 17,318           | 1.7%          | 10,306           | 0.9%          | -40.5%           |
| 18           | Korea        | 10,068           | 1.0%          | 7,645            | 0.7%          | -24.1%           |
|              | Others       | 215,470          | 20.9%         | 221,795          | 19.1%         | 2.9%             |
|              | <b>Total</b> | <b>1,032,302</b> | <b>100.0%</b> | <b>1,163,938</b> | <b>100.0%</b> | <b>12.8%</b>     |

Tabulator : TAMI



**Table(3) Imports of Taiwan Plastics and Rubber Machinery in  
2017 by Origin**

(Unit) : US\$1,000

| 2017<br>Rank | Country      | 2016           |               | 2017           |               | 17/16<br>Change% |
|--------------|--------------|----------------|---------------|----------------|---------------|------------------|
|              |              | Value          | %             | Value          | %             |                  |
| 1            | Japan        | 78,150         | 27.5%         | 105,266        | 34.1%         | 34.7%            |
| 2            | China        | 82,243         | 28.9%         | 86,728         | 28.1%         | 5.5%             |
| 3            | Germany      | 42,453         | 14.9%         | 57,896         | 18.8%         | 36.4%            |
| 4            | USA          | 23,432         | 8.2%          | 15,669         | 5.1%          | -33.1%           |
| 5            | Other        | 9,501          | 3.3%          | 8,982          | 2.9%          | -5.5%            |
| 6            | Austria      | 5,473          | 1.9%          | 6,704          | 2.2%          | 22.5%            |
| 7            | Italy        | 5,477          | 1.9%          | 6,580          | 2.1%          | 20.1%            |
| 8            | Switzerland  | 7,145          | 2.5%          | 3,877          | 1.3%          | -45.7%           |
| 9            | Canada       | 2,478          | 0.9%          | 3,039          | 1.0%          | 22.6%            |
| 10           | India        | 91             | 0.0%          | 2,394          | 0.8%          | 2530.8%          |
| 11           | Korea        | 5,713          | 2.0%          | 2,047          | 0.7%          | -64.2%           |
| 12           | France       | 806            | 0.3%          | 1,366          | 0.4%          | 69.5%            |
|              | Others       | 21,152         | 7.4%          | 8,227          | 2.7%          | -61.1%           |
|              | <b>Total</b> | <b>284,114</b> | <b>100.0%</b> | <b>308,775</b> | <b>100.0%</b> | <b>8.7%</b>      |

Tabulator : TAMI