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Looking Back on the History of ITMA, the Olympics of Textile Machinery

The largest event in the textile machinery industry, ITMA, was held in Barcelona this summer. I would like to express my gratitude for all of those who visited our booth during the show.

Muratec has exhibited at ITMA for many years since Basel in 1967, and I myself have attended every ITMA since then. The ITMA was a history of technological breakthrough, not only for our textile machinery engineering, but it has also positively influenced trends in the global textile industry. Now I would like to share some of my memories of ITMA with you.

Muratec entered its textile machine business in the late 1940s, when we adopted key technologies from Western textile machine manufacturers such as Abbott Co. and Gilbos NV. Until the rise of electrical and automobiles industries, the textile industry was the major industry for most of industrializing countries. The textile industry was supported by development of textile machineries, but Japanese textile machineries were behind Western machineries in this regard for a long time and the industry had to use mostly imported machineries.

From about 1960, by growing demand for developing competitive domestic textile machinery, I led our engineers to ITMA 1967 in Basel to learn about the global textile machinery industry, aiming to gain firm position in the market by having our own booth for the first time, rather than simply being a visitor. Our booth was very small and we exhibited only one two-for-one twister. Our attendants were all engineers except me and less than 10 members in total.

From this time, the driving force behind our development was to keep participating in ITMA, the quadrennial event like the Olympics for textile machinery industry, and create machinery that we could exhibit.

Participating in every ITMA gave me a valuable encounters to meet with many leaders of the Western textile machinery, such as the founders of Suessen in Germany, Rieter in Switzerland, and Savio in Italy, and they became my close friends. These personal acquaintances also had a positive influence on developing our textile machinery.
Our exhibition at ITMA 1979 in Hannover was a big turning point. Up until that time, European manufacturers were technologically far ahead of us, but the revolutionary “Mach Splicer” air splicing mechanism unveiled by Muratec changed the trends of the industry.

The development of the Mach Splicer was successful by the slow and steady efforts of one engineer. When he was performing a demonstration in one booth, people started gathering and surprised with its revolutionary improvement that enables knotless weaving on its next process. This achieved a dramatic increase in sales of our automatic winders.

At the same time a competing textile machinery manufacturer also started developing similar mechanism, but we secured a patent slightly earlier than them. I still remember the competitor coming to our company immediately after ITMA and offering us money to use our technology. Providing them with a license to use our patent made our Mach Splicer being equipped in automatic winders around the world, and led Muratec to be recognized as a leading global textile machinery manufacturer.

The textile industry was the core seed of industrial development, and its labor-saving, unmanned operations, and automation ended up spreading to industries such as the automobile and electrical machinery industries. As a matter of fact, many companies have their roots in the textile industry, including Japanese automobile manufacturer Toyota. It may seem that we have seen almost all conceivable technologies that can change the processes of the textile industry from their fundamentals, but I, as witnessing both the past and the present of the industry, eagerly wish to see machines again that will surprise and cheer the visitors at future ITMA exhibitions.

Looking Back on the History of ITMA, the Olympics of Textile Machinery

1967
First participation at ITMA. Exhibited Two-for-One Twister for Filament “No. 300.”

1971
Exhibited automatic winder “No. 17” through technical cooperation with Gilbos, Belgium.

1975
Exhibited pin twist type high-speed draw texturing machine, “No. 333 MACH CRIMPER.”

1979
Released nip twist draw texturing machine, “No. 333-III MACH CRIMPER.”

1983
Demonstrated package transportation using a Overhead Hoist Transfer, “SKY WAV.”

1987
3,000sqm exhibited space, the largest ever. In addition to exhibited machines, we proposed total solutions for textile factory automation including computer-integrated production systems and process Images using our own transfer technology.

1991
First exhibition as Muratec brand Two-for-One Twister. Two-for-One Twister has reached 4 million spindle deliveries.

1995
VORTEX spinning machine, “No. 851 Murata Vortex Spinner (MVS)” exhibited for the first time at a European exhibition.

1999
Exhibited new VORTEX spinning machine, “No. 861 MVS” and automatic winder, “No. 21C PROCESS CONER.”

2003
10th anniversary since the debut of the VORTEX spinning machine.

2007
Exhibited new automatic winder, “PROCESS CONER II QPRO EX / FPRO EX” and new VORTEX spinning machine, “VORTEX III 870.”

2011
Exhibited new automatic winder, “PROCESS CONER II QPRO EX / FPRO EX” and new VORTEX spinning machine, “VORTEX 870 EX.”

2019
Exhibition commemorating the 80th anniversary of the company’s foundation proved quite an event.

2021
Demonstrated package transportation using a Overhead Hoist Transfer, “SKY WAV.”

2023
Exhibited new VORTEX spinning machine, “No. 861 MVS” and automatic winder, “No. 21C PROCESS CONER.”
EXHIBITION REVIEW - ITMA 2019

Link to the Future
ITMA2019 Barcelona

Since our first exhibition in 1967, Muratec has continued to propose innovations at the ITMA that have changed and advanced the future of the textile industry. At ITMA2019 in Barcelona, Muratec showed the future potential of evolving textile machines under the theme of "Link to the Future" as a leading industry innovator.

1. Automatic Winder - PROCESS CONER II Series
   PROCESS CONER II QPRO EX Bobbin-tray 20sp (2 kinds yarn supply)
   PROCESS CONER II FPRO EX Link Coner 12sp (4 of 12 spindles, magazine specification)
   See P05-08
   First exhibition of the latest models of the PROCESS CONER II series, “QPRO EX” and “FPRO EX” in Europe.
   We introduced new functions and devices to contribute to improvements in maintainability and productivity such as the Bobbin Exchanger, splicer for CSY (Core Spandex Yarn) and Auto Balance function.

2. Spinning System - VORTEX Spinning Machine
   VORTEX 870 EX 16sp [NEW]
   See P07-08
   The world’s first public demonstration of the latest model VORTEX spinning machine, “VORTEX 870 EX.”
   A large crowd watched a demonstration of high-speed spinning at a speed of 560m/min that has broken the former model’s world record of high-speed spinning.
   A large crowd was also gathered at a presentation to introduce the features of the new model in front of the actual machine.

3. VORTEX Yarn - Fabric & Apparel Sample
   See P07-08
   In recent years, VORTEX yarns have been used for more materials and a wider variety of applications. We introduced examples using the latest fabric and product samples.

4. VORTEX Yarn - Collaboration with other companies
   See P07-08
   We exhibited fabrics and product samples manufactured in collaboration with 33 companies (raw material manufacturers, knit manufacturers, etc.).

5. VORTEX Yarn - Yarn Booth
   See P07-08
   We setup a booth dedicated to VORTEX yarns in the Fibers, Yarns & Fabrics Sector to introduce the characteristics of VORTEX yarns to apparel manufacturers, etc.

6. Muratec Smart Support
   See P11
   It is an IoT solution that supports stable operation of Muratec’s automatic winders/VORTEX spinning machines. We introduced applications that support smooth factory operations using the latest IoT at the core of the operation data management system, “Visual Manager III” and “V-LABO III.”

7. Genuine Parts
   See P17
   We introduced retrofit parts and maintenance pack items. We totally support processes from stable operation of machines to proposals of genuine parts after the introduction of a machine in cooperation with the MSS system.

8. Wireless Solution - silex technology
   We introduced the industrial network device provided by Muratec’s associated company “silex technology” that jointly developed the MSS specialized access point “MWE.” The device offers an advantage in quality and can have a stable connection even in a complex communication environment of factory.

9. Carbon Nanotube Yarn
   We exhibited “carbon nanotube spinning yarns” manufactured by processing extremely small carbon materials “carbon nanotube” to continuous yarn-like materials, taking advantage of spinning technology we have cultivated as a textile machine manufacturer. We introduced the latest activities of Muratec.

10. IDF+1 VORTEX - Trutzschler Booth
    We realized a reduction of drawing processes (the previous processes of VORTEX spinning) in cooperation with Trutzschler. We exhibited the VORTEX spinning machines also in the Trutzschler’s booth as “IDF+1 VORTEX.”
Higher-speed spinning machine, “VORTEX 870 EX” debut

The world’s first public demonstration of “VORTEX 870 EX,” the new model VORTEX spinning machine that can carry out the three processes of roving, spinning and winding on a single machine. We have achieved the maximum spinning speed of 550m/min based on the results and reliability of high-speed spinning we have accumulated until now.

There have also been rapid expansion in materials which can be spun and the applications for VORTEX yarns in recent years. We exhibited products manufactured in collaboration with 33 companies (material manufacturers and companies of other processes), as well as the latest fabric and product samples which take advantage of the features of VORTEX yarns.

And Muratec developed “IDF+1 VORTEX” jointly with Trutzschler to reduce the number of drawing processes (previous processes) from 3 processes. Using VORTEX spinning characterized by high-speed spinning and high draft ratios, we improved production efficiency by reducing the number of processes while maintaining high-speed performance. This time, we carried out operation demonstrations using slivers produced by this method.

We demonstrated the spinning of Polyester/Cotton and Viscose on a daily basis. Operation at a maximum spinning speed of 550m/min attracted a great deal of attention.

In the presentation, we introduced high spinning speed and cycle time reduction such as yarn splicing and doffing that are key points for improving production efficiency. Response to this model proved great, and we received a lot of questions about differences between the previous model, spinning materials, etc.

Marcio Andrade
Chief Engineer, MURATA DO BRASIL, LTDA.
Maximize your Benefit - QPRO EX

The “QPRO EX” achieves energy savings of 5% or more compared to the previous model “QPRO Plus” by using an energy-saving drum drive and an upgraded blower motor control method. Utilizing the strengths of the “QPRO Plus,” we have pursued advancements in automation and energy-saving performance that are indispensable to a spinning factory.

ARMS reaching out towards future technology - FPRO EX

“FPRO EX” can produce high-quality packages in optimal shapes without any ribbon by direct drive of the package and the linked traverse. We demonstrated high-speed winding of uniform and low density packages with optimal traverse control and tension control. Packages formed using this step precision winding offer superior high-speed unwinding and can be used for various applications.

Bobbin Exchanger removes and collects defective bobbins such as half-full bobbins discharged due to yarn quality factors to maximize machine efficiency.

Rajat Gangopadhyay
Deputy General Manager,
MURATA MACHINERY INDIA PVT. LTD.
**IoT Solution**

**Muratec Smart Support**

"Muratec Smart Support (MSS)" is an IoT solution that supports stable operation of Muratec’s automatic winders and VORTEX spinning machines. We demonstrated the maintenance support app “MSS Web Applications” that enables even less experienced maintenance personnel to smoothly carry out work, and “MSS PORTAL” that enables monitoring of machine operating status from business trip destinations and outside the factory.

We introduced network images for the factory and usage of applications to support smooth factory operation.

With the backdrop of world economy at yet another crossroad, our clients in the textile industry are looking forward anxiously to this proposal from the machinery partners to improve their factory utilisation. At Barcelona, ITMA 2019, we could see various concrete efforts from the industry on business intelligence and data management concepts. We, Muratec, had pioneered this effort years ago. At the salon, we showcased our latest MSS system which complements and helps enhance our machinery performance. We could clearly sense an encouraging response to our new MSS portal, real time data display and web product. Our customers, appreciated Murata’s sincere efforts to help them stabilize their machinery output by various functions such as job list, troubleshooting, alarm list, maintenance schedule and parts inquiry.

Many clients eagerly signed up our MSS portal to assess their factory situation at their ease of time and location through internet.

**Customer Support**

**Genuine Parts**

We introduced retrofit and maintenance pack items for existing machines. The retrofit for automatic winder 21D-X, 21C Bobbin Exchanger and QPRO upper thread sensor was presented by way of a video demo experience, and the actual maintenance pack items for automatic winders and VORTEX spinning machines were exhibited. We also demonstrated a parts estimation function of MSS Web Applications as total after-sales support linked to MSS.

Many customers were particularly interested in retrofit items and the video introduction drew large gatherings. We will continue to push forward with our efforts on optimizing operation stability and improvements in operating conditions for existing machines.

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In the Muratec Inuyama Plant, which is our largest technology & manufacturing base (in Inuyama City, Aichi Prefecture), there are about 50 factory buildings and office buildings and roads that run lengthwise and crosswise on the 390,000sqm premises.

Trucks and forklifts travel with safety foremost in mind, but on a Sunday in mid-June of each year, road bikes rule the roads at speeds of 40km/h. The plant is the venue for the “Criterium Road Race” hosted by the local cycling federation.

Criterium is a bicycle race where bikes circle the course, and time trial races and endurance races are held on the course that spans 2km. A range of racers from beginners to professionals and from kids to masters heat up the course each year.

New VORTEX Spinning Machine Launched

Murata Machinery, Ltd. announces the development and release of the new model VORTEX spinning machine “VORTEX 870 EX,” and its world debut at the Textile & Garment Machinery Exhibition “ITMA 2019.” By improving the motor, shortening the cycle time and upgrading the throughput of each device, the new model 870 EX realizes high-speed spinning at 550m/min. (max.), exceeding the previous model “VORTEX III 870” at 500m/min to become the world’s fastest. In addition, we have expanded the material that can be spun in response to the expanding use of VORTEX yarn, and the latest generation makes it possible for the use of the widest range of materials and counts as a single spinning machine.

Showroom renewal (Headquarters in Kyoto)

There is a facility to welcome visitors called the “textile machine orientation room” in our main office in Kyoto. The orientation room introduces the spinning process flow, the history of our textile machines, and the latest machine functions, etc. In the sample corner, you can pick up and feel and see apparel products using VORTEX yarn. In addition, the laboratory located next to the orientation room allows you to see the actual operating state of a machine. A full-scale upgrade was carried out at the beginning of this year, and this resulted in a greater variety of samples being displayed and easier-to-understand exhibition contents. When you visit the main office in Kyoto, please drop by the orientation room.

Announcement of Strategic Partnership with Alert Innovation, Inc

Murata Machinery, Ltd. has signed an agreement on a strategic partnership with US material handling system supplier Alert Innovation, Inc. Alert, an American startup company, has developed ALPHABOT®, a unique picking solution system for delivery centers. As a strategic partner, Alert has collaborated with the major American grocery store chain Walmart and it has already started commissioning in some Walmart stores. Murata Machinery will undertake a transfer of technical knowledge on the ALPHABOT® system, and will have exclusive rights to market and sell, design, manufacture, and service systems based on ALPHABOT® throughout Japan.
Furoshiki

“Furoshiki” is a piece of cloth made in a wide variety of colors, patterns and materials. The Japanese word “furo” means bath in English and “shiki” is from the Japanese verb “shiku,” which means to spread. It is interesting that the literal meaning allows us to imagine the origin; however, its usage nowadays completely differs from the usage of its original meaning.

Furoshiki is a reusable wrapping material to wrap and carry gifts for the people who are dear to us. It can be folded into a compact size and can wrap items of any shape such as a bottle of wine. It can be kept in your bag as a spare bag that may be used when you have to carry extra items. It can be used in many unique ways.

Traditional etiquette is also important in the use and presentation of furoshiki, and requires a careful choice of color and pattern depending on the purpose: vermillion is for celebrations; purple shows respect; indigo blue is for mourning; and furoshiki with a “kamon (family crest)” is for formal occasions. Materials and weaving vary depending on each occasion or usage. A representative example is real silk crepe called “Chirimen,” which is similar in look and style to that of a formal kimono. There is a sense of quality and elegance in the puffy feel and luster. Furoshiki made of durable cotton is suitable for everyday use, and broadcloth, shantung, tenjiku cotton and other various fabrics are used according to taste. When wrapping things together with furoshiki, the ends of the furoshiki are wrapped together and knotted, so furoshiki made of a wrinkle-resistant chemical fiber fabric also comes in handy.

When wrapping a piece of cloth to be presented, people in Japan consider the appropriateness of place and feelings for the other person that expresses occasion and message, and this truly represents the mentality that the Japanese value.