

THE RECYCLER

Trade magazine for the toner and inkjet remanufacturing industry ~ making waste work



An interview with IMEX

IMEX, is one of the most trusted and reliable names in the industry and is a world leader in aftermarket toner development and manufacturing. Through their refined technology and global distribution network, IMEX provides high quality toner products and responsive technical support to aid the performance of their customers' products.

Since its foundation in 1982, IMEX has gained a solid reputation as a developer and manufacturer of electrographic toners. They have achieved steady results with new imaging materials with focus on highly universal monochrome and colour toners, as well as low temperature fusing toners.

In a constantly changing market with difficult technical challenges, how important is the research and development process to IMEX?

We constantly invest in refining our toner technologies including nanotechnology, physical properties and chemical analysis. Our products and solutions for the most current

market needs are developed through logical reasoning with established technology. Our low temperature fusing toners are designed via rheology profiling, which, is one of our key toner technologies. In order to mitigate component contamination, namely developer roller and OPC build-up, molecules with excessive radical reactions are

IMEX Company History

July 1982	Company established in Chuo-ku, Tokyo
November 1985	Headquarters relocated to Hiratsuka-shi, Kanagawa-ken
November 1986	Headquarters building constructed
November 1988	Okayama First Plant built
March 1995	New office building built at Okayama Plant
March 1997	American corporation Dynatone America Corporation became a full subsidiary company
January 1998	Okayama Second Plant built
February 1998	Dynatone America Corporation changed its name to IMEX AMERICA CORPORATION
September 1999	OKAYAMA Third Plant built
April 2002	Subsidiary company IMEX PRINT SOLUTION CO., LTD. established
April 2002	New HEAD OFFICE built
October 2002	Oregon Plant built
March 2003	ISO9001, ISO14001 certification (assessment and registration)
February 2004	Subsidiary company IMEX EU TRADING S.R.L. established
October 2010	A-TECH CO., LTD. became a subsidiary company by equity participation
November 2011	OKAYAMA Fourth Plant built

excluded by proprietary toner formulas and process design. We intend to provide the benefits of our technology via state-of-the-art products to our customers, for them to enjoy stable and long lasting performance with vivid image reproduction.

What is IMEX 'Total Design' concept?

From development of new products to final lot qualification, we constantly review every step of the process to ensure the best quality products. The design range spans production equipment to material molecule distribution design. SFS - our surface treatment technology, is one of the production methods adopted in the early stage of developing round-shaped toner, which mimics polymerised toner applications. We have optimised not only our SFS process but also the resin material design to help generate smooth toner surface with sufficient transfer efficiency and precise image production. Constant communication with material and equipment suppliers through a wide web of relationships has made it possible for IMEX to develop total production design.

Production equipment and process control are a big investment in the quality and consistency of products. Do you invest in process equipment to keep up with the demands of the latest toner technologies?

In the course of making decisions for investment, we always focus on the benefits that a particular piece of equipment will bring to the quality of our product. With high shear compounding equipment and process, our products keep high image density and low background throughout cartridge life. Our advanced

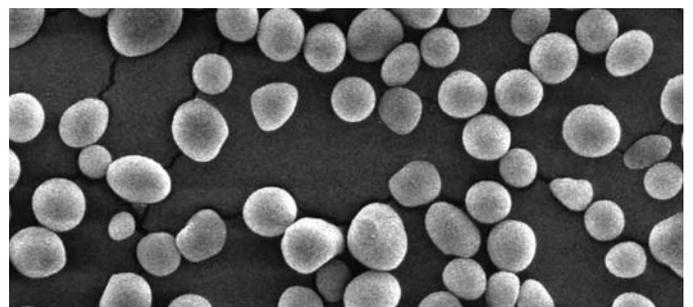
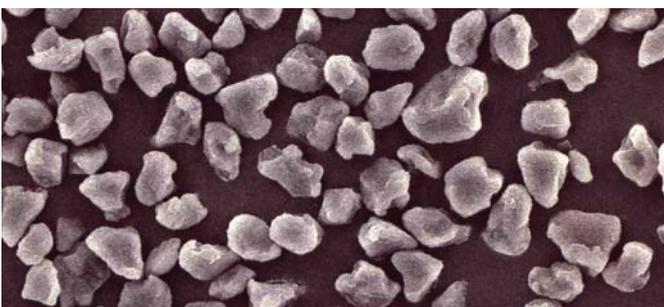
pulverising mills generate particles with sufficient diameter and a round shape, which are needed for the latest printer/MFPs with limited allowance for waste toner. The quality of IMEX products is the result of an advanced and unique production system utilised by IMEX Okayama and Oregon factories. In both production and research technology, we constantly and generously invest in suitable equipment to enhance our role as a leading toner manufacturing company.

What quality systems do IMEX have in place to maintain the consistent high quality of their products?

All IMEX products are constantly checked and monitored through our QA process designed by the ISO9001 standard. On the basis of our longstanding experience, our process is constantly reviewed and improved for more efficient and rigorous quality screening. The preciseness of the QA process is supported by our state-of-the-art measuring instruments which include transmission electron microscopes, scanning electron microscopes, charge spectrometers, particle image analyzers, and particle size distribution measuring equipment. We strive to improve the overall reliability of our products by not only enhancing the physical quality of toner products but also by constantly improving QA process quality via daily feedback activities defined by the ISO standard and our internal quality systems.

Do IMEX utilize any other resources to help understand what customers require from their products?

To be able to provide the best product and support to our customers, we



left: Toner Picture TMC before surfusion, right TMC after surfusion



Tomoaki Abe, Director Technical Department of IMEX

research not only electrographic technology but also its applications. The staff members of our three business domains: toner powder manufacturing, cartridge recycling and print shop business, are constantly communicating via meetings and technical reviews, to help understand the actual usage and potential issues of our toners in cartridges in a real life situation. We hope that understanding actual toner and cartridge usage enables us to provide the right solutions at the right time if customers should encounter issues in the field.

What is the IMEX corporate philosophy?

We constantly try to contribute to the toner industry via our company strategy, operations and acting codes. All company activities are unified by the following corporate philosophy.

1. Contribution to advanced information society
2. Harmony with the global environment
3. Constant management innovation
4. Innovation and mobility
5. Respect to human harmony and development of a stimulating work environment

Akira Kitaoka, our founder and President, states: "Our aim is to create imaging materials for tomorrow and to contribute to the wide spectrum of society at all times through the latest electronic and advanced chemical technology."

On what kind of solutions for latest OEM applications you are currently working?

We are currently launching a couple of new products, utilising the latest IMEX technology and quality standard.

For example, TMC040 our new solution for most HP colour printers.

Its formula is a refined and highly universal version of our well known TMC013 & 027 toners. Longer life, which is one of the key cartridge specifications of the current MPS driven market, was a primary focus in R&D of these new toners. The product is designed to mitigate build-up on cartridge components, degrading image quality by cartridge end, and potential fuser wrapping and/or fuser build-up in legacy printers, such as HP5500. A new rheology profiling via controlled resin molecular distribution, which is the outcome from our state-of-the-art R&D, is applied to the new formulas.

IMEX is known to be specialised in development and production of polyester toners. Why are polyester based toners becoming more important on the new generation products?

Polyester, is our key material for the most recent new products including

TMC040, because it contributes to better toner performance with unique physical properties.

Polyester shows the requisite traits for enhancing toner performance in the most advanced MFPs and printers. The resin accepts a range of molecular design changes and additives for optimizing rheological characteristics, including viscosity and elasticity. The flexibility enables a wider fusing window with lower temperature melting and higher temp. anti-offsetting. The material also indicates mechanical rigidity, which prevents toner particle break-up in printer cartridges and MFP developer units. Low VOC is one of the well-known benefits of the resin, whose condensation polymerization process transpires VOC along with water generated. AKO3 (M402/506), AJI (M102/203), and YFX (TK3110-3190), which are all new monochrome polyester based toners, are developed and manufactured by maximizing the benefits of this material.

This in combination with our surface treatment in which we shape the finished particles and give them a spherical form, will ensure stable image quality throughout life and performance on OEM level.



IMEX Okayama factory