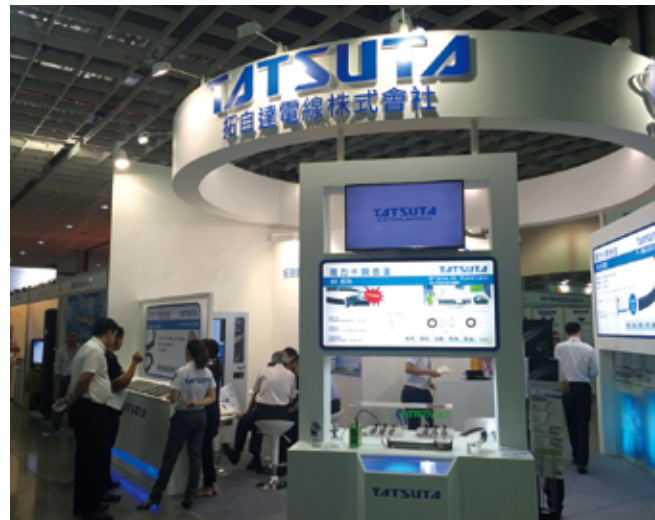


TOPICS



On display at robotics exhibition in Tokyo in 2015, and in Shanghai and Taipei in 2016

A joint display was held at international robotics exhibitions with the participation of Tatsuta Electric Wire & Cable's appliance wiring manufacturing and sales subsidiaries Chugoku Electric Wire & Cable Co., Ltd., Tachii Electric Wire Co., Ltd., and Changzhou Tatsuta Chugoku Electric Wire & Cable Co., Ltd. Over 1000 people visited the booth during the exhibitions. The features and benefits of appliance wiring from the Tatsuta Electric Wire & Cable Group are potently represented by the FA (Factory Automation) and robotics cables that utilize independently developed copper alloy (high-strength copper alloy) for superior bending durability, as well as the cabtire cables, instrumentation and coaxial cables, and broadcast cables that meet UL and a variety of other standards. A wide range of sheath materials are also available, making it possible to supply special sheathing with superior heat, oil and wear resistance. The group's strength is being able to provide one-stop, individually tailored appliance wiring solutions based on customer needs, including a wide range of customized terminal processing options.



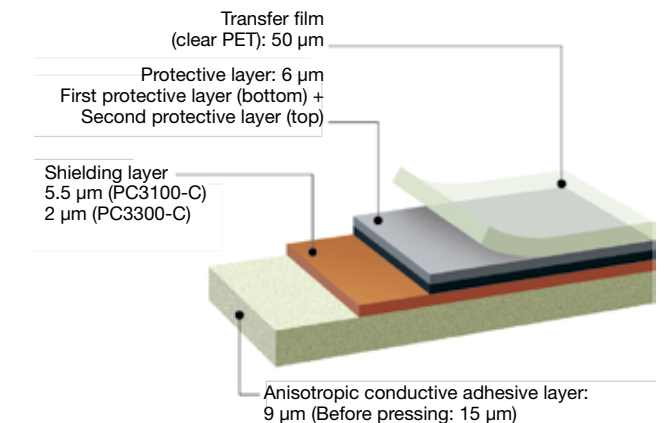
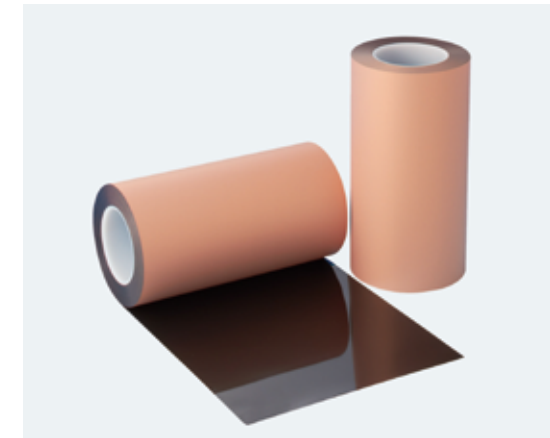
Leveraging the company's core technologies to provide a new generation of medical equipment products

Leveraging its core technologies in extrusion molding, fine particle dispersion, compounding, thin film, ultrafine wires, optic fiber processing and liquid detection sensing, Tatsuta Electric Wire & Cable also provides a new generation of safer and more reliable medical device products. Their dialysis needle dislodgement detection system utilizes proprietary liquid detection sensor technology to detect needle dislodgement and blood leaks during a dialysis session. The intravenous counter accurately displays the per minute IV drip rate. Tatsuta Electric Wire & Cable will provide compound tubes and other medical equipment products that utilize extrusion technologies that have been refined over many years in wire and cable manufacturing.

FACT SHEET

EMI shielding films for mobile devices

Thin and flexible EMI shielding films to meet increasingly diverse needs



Technology overview

As mobile devices become more feature-rich and sophisticated, there is a growing need to process signals at a greater speed; furthermore, a wider range of frequencies is needed to accommodate Wi-Fi, Bluetooth, multiple transmission systems, and so on. Consequently, such devices have become increasingly susceptible to interference from electromagnetic waves from external sources and those generated inside the devices themselves, and solutions to limit that interference have also become increasingly important for flexible print circuits (FPC), which are essential components of mobile devices. The company originally commercialized conductive paste as a measure to counter electromagnetic interference (EMI) for printed circuit boards (PCB), but lack of flexibility had always been an obstacle to its use in film FPCs. Tatsuta Electric Wire & Cable therefore developed EMI shielding films that could be laminated together with FPCs using their metallic thin film and film manufacturing technologies. This EMI shielding film was first used by Japanese manufacturers in 2000, and overseas manufacturers in 2004.

Feature 1

Tatsuta Electric Wire & Cable's EMI shielding film is a high-performance shielding material that can be laminated on FPCs and eliminates EMIs over a broad spectrum of frequencies including those in the higher range.

Feature 2

The material features flexibility and thinness so that it does not impair the FPC's physical properties. A wide range of products is also available to match the multiplying needs of mobile devices as they become more sophisticated, such as for high frequency types and stepped designs, with a broad lineup of peripheral materials such as adhesive films and films to enhance the ground connection.

Development background

Tatsuta Electric Wire & Cable's conductive paste was first used as an EMI countermeasure in game machine PCBs around 20 years ago. Following this, similar needs arose in the FPC marketplace, but Tatsuta Electric Wire & Cable's conductive paste at that time could not meet the flexibility requirements. To solve this issue, the company began work on creating a film version of the conductive paste, and after five years of assiduous research and experimentation, the company succeeded in developing a thin, flexible EMI shield film.

Uniqueness

Tatsuta Electric Wire & Cable was successful in establishing metallic paste technology by building on the anti-corrosion and resin compounding technologies refined over many years of wire and cable development and manufacture, and by developing in-house fine particle dispersion technologies. Based on an understanding of EMI shielding for wires, Tatsuta Electric Wire & Cable then worked on introducing metallic thin film and film manufacturing technology from other industries, resulting in the successful development of EMI shielding film. The product is a combination of existing and proprietary technologies, as well as technologies from other industries.

The outlook for the future

The mobile device market is diverging into high-end and low-end devices. For the high-end market Tatsuta Electric Wire & Cable will release higher-performance and higher-quality devices with next generation interfaces and communication systems, while for the highly competitive low-end market the company will enrich its lineup of low-cost products by simplifying device functionality as much as possible. Tatsuta Electric Wire & Cable is also actively working on entering new markets such as the automotive market, which is undergoing rapid electrification.

Company history

1945	Company established	1997	Commences manufacture and sale of optical fiber couplers
1947	Commences manufacture and sale of wires and cables (began operations)	2000	Commences sales of EMI shielding films
1950	Tatsuta Valve Co. Ltd. (currently Chugoku Electric Wire & Cable Co., Ltd.) established	2002	Involved in the establishment of Sumiden Hitachi Cable Limited, maker of electric wires and cables for the construction and electric installation markets
1953	Wakae Works (currently Osaka Works) completed	2003	Commences in-house manufacture of EMI shielding films
1954	Listed on the Osaka Securities Exchange	2011	Changzhou Tatsuta Chugoku Electric Wire & Cable Co., Ltd. (China) established
1955	Commences manufacture and sale of telecommunications cables	2012	Tatsuta Electronic Materials Malaysia Sdn. Bhd. (Malaysia) established
1961	Listed on the Tokyo Stock Exchange	2013	Commences operations at Tatsuta Technical Center
1975	3T Service Co., Ltd. (currently Tatsuta Welfare Service Co., Ltd.) established		Delisted from the Osaka Securities Exchange (due to the consolidation of cash markets into the Tokyo Stock Exchange)
1976	Commences operations at Fukuchiyama Works (currently Kyoto Works)	2014	Acquires majority of shares in Tachii Electric Wire Co., Ltd.
1979	Tatsuta Electric Wire and Cable Analysis Center Co., Ltd. (currently Tatsuta Environmental Analysis Center Co., Ltd.) established	2015	Commences operations at Sendai Works
1981	Commences manufacture and sale of water leak detection systems		Tatsuta USA, Inc. (USA) established
1984	Commences manufacture and sale of bonding wires	2016	Shanghai Tatsuta Co., Ltd. (China) established
1987	Commences manufacture and sale of polymer and copper conductive pastes		
1989	Commences manufacture and sale of high-strength copper alloy wires (for factory automation, etc.)		

Company Profile – Key information (as of August 2016)

Location	2-3-1 Iwata-cho, Higashiosaka, Osaka, 578-8585
URL	http://www.tatsuta.co.jp/
TEL	06-6721-3331 (main number)
FAX	06-6726-2300
No. of employees	757 (consolidated basis as at March 31, 2016)
Capital	6,676 million JPY (as at March 2016)
Established	1945 (began wire and cable manufacture and sales in 1947)
Representative	President and Representative Director, Rentaro Tonoike

Business areas

Manufacture and sale of electric wires and cables and functional materials such as EMI shielding films for mobile devices.