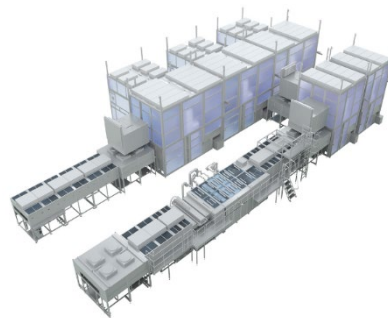


SCREEN Launches New Coater/Dryers for Producing Substrates Used in Flexible Displays

– SK-P1501G and SK-P2200G Join E Series Lineup –

Kyoto, Japan – December 20, 2022 – SCREEN Finetech Solutions Co., Ltd. (SCREEN FT) has finalized development of two new coater/dryers for the production of substrates used in flexible displays. The SK-P1501G and SK-P2200G are respectively designed to handle 6th¹ and 8th² generation substrates and will join SCREEN FT's existing E series³ group of production systems for OLED panels. The company launched both models earlier in December.



SK-P series

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Flexible displays generally employ OLED panels that use thin films such as polyimide⁴ for their substrates instead of the standard glass. Their bendability and foldability have led to significant growth in the markets for particularly mobile and wearable devices. Adoption of the displays for IT and automotive applications has also increased in recent years, and their shapes and forms are diversifying.

In response to these trends, SCREEN FT has developed two new coater/dryers to be used in the formation process of the substrates for flexible displays. They are the SK-P1501G and SK-P2200G, designed respectively for 6th and 8th generation substrates. Both have been added to SCREEN FT's current E series lineup of production systems for OLED panels.

The SK-P1501G and SK-P2200G inherit the main capabilities of the SK-P1500G, a system for 6th generation substrates that has built an impressive track record since its launch in 2016. The two newly released models are designed to handle coating of high-viscosity polyimide varnishes of several thousand mPa · s, allowing them to form the extremely thin films needed for flexible substrates.

The systems also dramatically improve throughput for mass production. They do this by making it possible to perform all processes from the cleaning of large-size glass support substrates to polyimide coating and drying on a single integrated line. Their coater section features an optimized version of the technology used in SCREEN FT's Linearcoater™ slit-type coating units, helping them to achieve outstanding uniformity for a range of film thicknesses.

In addition to conventional thick films, the systems are able to form thin films of just 5 µm,⁵ which will enable them to handle thickness requirements for substrates as flexible displays continue to diversify. SCREEN FT has also enhanced various measures to further reduce the risk of organic contaminants and particles being generated and adhering to substrates plus it has significantly improved maintenance functions.

The SK-P2200G also delivers an industry-leading line takt of 120 seconds or less for 8th generation substrates. It will enable manufacturers to further improve productivity and increase the size of OLED displays. SCREEN FT is currently expanding its E series lineup. It believes these systems will make a major contribution to the reliable production of OLED panels and other high-definition, high-value-added displays.

●SK-P1501G, SK-P2200G

Coater/Dryers for Substrate Formation Process of Flexible Displays

Main features

- Line takt times 120 sec. or less
- Coating uniformity 3% or less
- Coating thickness 5 to 20 µm when dry (guaranteed under prescribed conditions)

• SK-P1501G

- Substrate sizes: 1,500 x 1,850 mm (6th generation)

• SK-P2200G

- Substrate sizes: 2,200 x 2,500, 2,250 x 2,600, 2,290 x 2,620 mm (8th generation)

1. Sixth generation substrate size: 1,500 x 1,850 mm
2. Eighth generation substrate sizes: 2,200 x 2,500, 2,250 x 2,600 and 2,290 x 2,620 mm
3. The E series is a group of systems designed to resolve various issues that arise in production processes for OLED panels, including the generation of organic contaminants, microscopic particles and static electricity. SCREEN FT's efforts have significantly improved yield rates, helping the E series to achieve industry-leading productivity. These features have led to its systems being widely adopted by manufacturers for mass production applications.
4. Polyimide is a general term for a high molecular compound. It demonstrates extremely high mechanical strength, outstanding heat resistance and strong electrical insulation as well as excellent chemical resistance. Polyimide film is widely used in the flexible printed circuit boards for cameras and office automation devices, interlaminar insulation for electrical wiring and protective films for semiconductors.
5. This thickness is attained when the film is dry and is guaranteed under prescribed conditions.

Note: Linearcoater is a registered trademark and/or trademark of SCREEN Holdings Co., Ltd.

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