Slide-bead Coating

The slide-bead coating technique enables layers of medium to large thickness to be applied. The application range extends from rather slow coating speeds up to average speeds of 300-400m/min. Slide-bead coating enables one or more fluid layers to be applied in a single pass to the substrate which is to be coated; the number of layers may exceed ten, depending on the particular application.

When the slide-bead coating method is used, the fluid film emerges from the exit slot of the die in an upward direction and then flows down the inclined surface ("Slide") before bridging the narrow bead gap between the die lip and the running web— in much the same way as when the slot-bead coating method is used.

To achieve the most uniform possible film thickness on the substrate to be coated in cross-machine direction, the parallelism of the bead gap must be set with great precision as must the slot height. An inherently stable and highly accurate positioning system is required. For this purpose, TSE develops and produces coating dies and also various accessory components which are used to optimize the application window.

Slot-bead Coating

Slot-bead coating permits the application of layers which may range from very thin to relatively thick, depending on the particular use. The application area extends from very slow coating speeds of a few cm/min up to medium speeds of 300-400m/min.

By means of slot-bead coating techniques, one or more fluid layers can be applied in a single pass onto the web which is to be coated; the number of layers is limited. In the slot-bead coating method, the fluid film leaves the exit slot of the coating die and directly bridges the very narrow bead gap between the die lip and the running web.

To achieve the most uniform possible film thickness on the substrate to be coated in cross-machine direction, the parallelism of the bead gap must be set with great precision as must the slot height. For this purpose, an essentially stable and highly accurate positioning system is required. For this application method, TSE develops and produces dies and also various accessory components which are used to optimize the application window.