CURRENT TECHNOLOGY WHICH NEW WAY PTVC COULD REPLACE

Vacuum processes have long been used in the manufacture of integrated circuits and will likely be required for some time, especially for high-quality displays. Vacuum assisted deposition achieves the highest quality films and the best barrier performance.

The current technology for the vacuum deposition of thin films onto flexible substrates is typically done within large drum-shaped vacuum chambers. These chambers are usually equipped with side chambers that contain a feed roll and a take-up roll. The volume contained in these chambers can easily add up to several cubic meters. Such large vacuum chambers – typically made from stainless steel – have huge atmospheric loads exerted on them, and so they must be built to withstand these loads. This makes vacuum chambers very expensive. They also require extensive services and have significant installation requirements. This makes the current process very expensive. This level of expense precludes many researchers and developers of flexible circuits from being able to avail themselves of the best films that could be used for their purposes.

With the New Way Air Bearings pass-through vacuum chamber, continuous vacuum processing would be possible, eliminating the need to put a roll in a large drum vacuum chamber, and pump it down for processing. Instead, the web would flow though one or more small vacuum chambers, and would do so continuously. This would be a significant advantage because it would dramatically reduce the cost and effort of vacuum deposition processes.