

HIPIMS POWER SUPPLY UTILIZATION FOR INDIUM-TIN OXIDE COATING DEPOSITION ON ROLL POLYMERIC SUBSTRATES

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Oxide coatings deposition in reactive process from metallic targets has particular importance because metallic targets are cheaper in comparison with conductive ceramic targets. Besides use of metallic targets from indium-tin alloy can make utilization factor up to 90%.

In paper utilization of HIPIMS power supply for oxide and metal coating deposition on polymeric substrates is considered.

Key parameters of the power supply for work with thermosensitive polymeric substrates are defined. For oxide coating deposition metal targets were used and reactive process was spent in a transition mode. Besides the original algorithm of process control for maintenance of the set parameters of a coatings during the long period of time was used.

Dependences of the basic properties of coatings (optical characteristics, electric characteristics, dynamic deposition rate, etc.) from power supply parameters are defined.