

Overview of HIPIMS and other new Technologies for coating of tools and components

Thomas G. Krug, Roel Tietema, Frank Papa, Ivan Kolev

Hauzer Techno Coating BV, VENLO, The Netherlands

tkrug@hauzer.nl

HIPIMS (High Impulse Magnetron Sputtering) and MPPS (Modulated Power Pulse Sputtering) has received in the last years a lot of attention as it opens a total new window of opportunities to apply hard coatings on tools and components. Due to the high ionisation of the metallic component improved adhesion and very dense, defect free coating can be generated, which opens new windows for the application of sputtered hard coatings. DMS sputtering (Durable Magnetron Sputtering) opens the window to deposit thick Oxide coating on tools and components in a reproducible stable process with advantages in the wear properties in specific applications. These technologies are available now on industrial scale PVD equipment. The presentation will give an overview about the principles, the set up in commercial PVD machines and discuss some results in real tool tests.