

POF006

**Ready for the next step in tool performance !**

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In our continuous search for improvement we have taken the step for industrial units with HiPIMS capability, discovering new properties, different material behaviour compared to conventional ARC coatings and better performance in cutting and forming applications. As many investigations were done on small-scale units, bringing this technology to industrial scale, larger units and also process upscaling was needed.

Today real production of coated parts require not only good coating properties also production related topics like reliability, easy maintenance, cost per part and flexibility of the coating unit itself plays an important role.

In this regard different HiPIMS coatings from AlCrN-based and AlTiN-based systems were deposited on industrial scale units for tool applications. The applied coatings were investigated concerning mechanical film properties like hardness, Young's Modulus, chemical properties like composition and phase formation.

To verify the performance of the coating machine and the deposited coatings, industrial tests are carried out. The obtained results shown, that the HiPIMS technology is ready for serial production in a modern production environment.

**Keywords**

HiPIMS  
ALCRN  
ALTiN  
Tool