



NEWSLETTER DTI TRIBOLOGY CENTRE

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Functional and decorative coatings - "Danish prizewinning pistol shooters go all in ..."

Danish elite pistol shooters competing on European and world level go beyond traditional standard weapons applying optimized coatings from the Tribology Centre, Danish Technological Institute.

The shooters, who are among the top 10 best pistol shooters in Denmark, prefer to use Diamond-Like Carbon (DLC) and titanium nitride (TiN) due to a combination of coating functionalities as well as the visually appealing appearance of both the DLC-TR and the TiN coating.

According to the shooters, the coated weapons are much easier to clean and do not need the same amount of lubrication; in some cases, lubrication can even be totally avoided.

The DLC-TR is an optimized a-H:C coating supported by a CrN adhesion layer going gradually into the low-friction DLC top layer. The TiN coating applied in the present case is a high-temperature version, but a low-temperature version is also available.

The Tribology Centre offers a number of different DLC and TiN coatings as summarized in the table.

	DLC-TR	DLC-Si	Graphite DLC	IBAD-DLC	TiN	TiN-HP
Micro hardness (HV)	~1200	~2000	~1000	~1300	2200	2100
Process temperature (°C)	<200	<200	<300	-50	<450	<170
Process type	DC sputtering	DC sputtering	DC sputtering	Ion beam	DC sputtering	HiPIMS
Max application temperature (°C)	~250	~300	~300	~250	~450	~450



Pistol parts from the company "INFINITY" coated with TiN and DLC-TR for both functional and decorative purposes.

For more information, please contact

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