

# Your safe haven.

## 您安全的保障

BALINIT coatings for reliable engine valves, valve plates, valve seats and piston rings for diesel- and LNG-engines.

BALINIT 涂层让柴油和天然气发动机的阀门、阀板、阀座和活塞环更稳定。



## BALINIT coatings improve efficiency and reduce emissions.

### BALINIT 涂层提高效率且减少废气排放。

Ship engines have to be more and more efficient to reduce emissions at sea but also in harbours. Higher engine temperatures and pressures lead to increased stress and tribological demands on critical components such as: valves, valve plates, piston pins and piston rings. BALINIT® coatings have superior hardness and friction properties compared to classic coatings like electroplated chromium and therefore reduce wear and friction.

轮船发动机不仅在海上而且在港口需要更有效地减少排放。较高的发动机温度和压力使关键零部件的压力和摩擦增加。例如：阀门、阀板、活塞销和活塞环。BALINIT® 涂层较传统电镀铬拥有更好的硬度和摩擦性能因此减少磨损和摩擦。

## Now benefit from less wear, less hydrocarbon buildup and higher wear resistance:

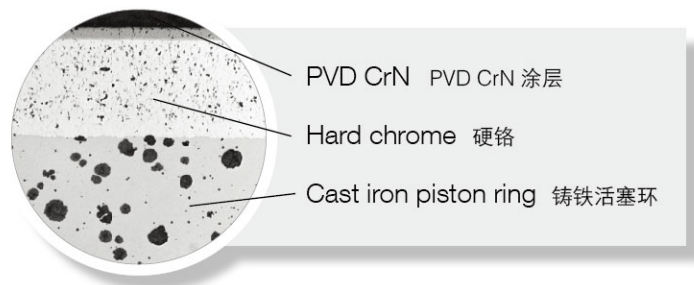
### 现在磨损减少，碳氢化合物沉积减少，抗磨损性提高：



BALINIT® FUTURA NANO prevents hydrocarbon buildup on valves.  
BALINIT® 防止碳氢化合物沉积在阀门上



BALINIT® CNI (CrN) significantly improves the wear resistance of the hard chromium base layer. The PVD coating is 40 µm thick.  
BALINIT® CNI(CrN) 显著提高硬铬基层的耐磨性。PVD 涂层的厚度是40微米



PVD CrN PVD CrN 涂层  
Hard chrome 硬铬  
Cast iron piston ring 铸铁活塞环

## Your advantages with BALINIT coated engine components:

### 经BALINIT涂层后的发动机零部件优势：

- Higher wear resistance due to higher hardness
- Enabling higher engine pressures
- Less frictional losses and therefore less emissions
- 较高的硬度带来了较高的抗磨损保护
- 使发动机能承受更高的压力
- 减少摩擦损失使废弃排放减少

## We recommend: BALINIT coatings for more engine power.

### 我们推荐：BALINIT涂层使您的发动机更强劲。

Coating 涂层	Coating material 涂层材料	Micro-hardness (HV 0.05) 维氏硬度(HV 0.05)	Typical thickness 标准厚度	Coefficient of friction μ against steel (dry) 摩擦系数对钢(干式)	Colour 颜色
BALINIT® DLC	a-c:H	2500	2-4 µm	0.1 - 0.2	Black-grey 黑灰
BALINIT® FUTURA NANO	TiAlN	3300	2-7 µm	0.5	Blue-grey 蓝灰
BALINIT® CNI	CrN	1700	5-40 µm	0.5	Grey 灰色

There's much more to talk about – please get in touch to discuss what we can do to improve your business.  
更多需要了解，请与我们联系。

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