

Reduce your tool costs with reconditioning 通过修磨重涂处理，降低您的工具成本

BALINIT® LATUMA also means: No performance losses after reconditioning. Even after multiple recoating operations, you still benefit from the same high performance as after initial

BALINIT® LATUMA同时意味着：修磨重涂处理后，无性能损耗。即使经过多次重涂操作，您仍旧可以像初次涂层一样获益高性能—您可以节省相当一笔成本。我

coating – and you save considerably on costs. We would be pleased to provide you with information on our reconditioning services.

们非常乐意为您提供修磨重涂服务的信息。



Benefit from the BALINIT LATUMA high-performance coating

Contact us now!

体验BALINIT LATUMA高性能涂层

即刻与我们联系!

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BALINIT LATUMA Versatility wins BALINIT LATUMA 广泛成功

First-class performance in milling,
drilling and turning
在铣削、钻削和车削应用中的顶级表现



Cutting Tools



BALINIT LATUMA

Make your machining operations a model for success

让您的机械加工成为成功的典范

Tool manufacturers, mechanical engineering, the aircraft industry and reconditioners can look forward to even more versatility and performance. With BALINIT® LATUMA, developed on the basis of the BALINIT® coatings FUTURA NANO and X.CEED, it offers you decisive advantages. Not only is the machining and use of a wide variety of challenging materials even more productive now, the 工具制造商、机械工程、航空航天工业和刀具修磨厂商都需要提高工具的通用性和性能。通过BALINIT® LATUMA—基于BALINIT® 涂层FUTURA NANO及 X.CEED所研发的涂层—将为您提供决定性的优势。不仅仅能够在加工多种难加工材料时提高

process reliability under difficult working conditions is also increased at the same time. Employ this coating solution for indexable inserts and shank-type tools – take your metal processing business to new levels of success with BALINIT® LATUMA. Oerlikon Balzers, a global technology leader in hard coatings, helps you on the way.

生产力，同时在困难的加工环境中，工艺稳定性也得到提升。在可转位刀片或杆状刀具上使用BALINIT® LATUMA涂层，将把您的加工业务带上新的水平的成功。全球硬涂层技术领导者欧瑞康巴尔查斯，一路伴您前行。

Top coating properties lead to top results

顶级涂层性能，带来最好的表现

OPTIMIZED PERFORMANCE 优化性能

| | | |
|--|---|---|
| The latest in source technology 最新的表面技术 | > | Optimized layer structure and layer surface 优化涂层结构和涂层表面 |
| High aluminium content 高铝含量 | > | Superior oxidation resistance and hot hardness 提升抗氧化性和红硬性 |
| Outstanding chemical stability 高化学稳定性 | > | Optimal crater wear resistance 有效对抗月牙洼磨损 |
| Balancing of residual stress and coating hardness 平衡残余应力和涂层硬度 | > | Broad application range 广泛的应用范围 |
| Optimized thermal shock resistance 优化抗热冲击力 | > | Ideal for wet and dry machining 干、湿加工的理想选择 |
| High cutting speeds and feed rates 高切削速度和进给率 | > | Enhanced productivity 提高生产力 |

BALINIT® LATUMA

More productivity, process reliability and efficiency in machining operations
在机械加工中，生产力、工艺稳定性和效率均得到提高

Rely on a tool coating with application versatility

使用一种涂层，实现多种应用

Milling and turning with indexable inserts

可转位刀片的铣削和车削

Milling in

- Stainless steel, HRSA
- Cast iron
- Steel

Turning in

- Stainless steel for finishing operations

铣削:

- 不锈钢, HRSA
- 铸铁

车削:

- 不锈钢, 精铣

Milling with carbide and HSS end mills

硬质合金和高速钢铣刀的铣削

Milling in

- Stainless steel, HRSA
- Cast iron
- Difficult-to-machine tool steels and high-alloy steels
- High-strength, hardened steels

铣削:

- 不锈钢, HRSA
- 铸铁
- 难加工工具钢和高合金钢
- 高强度、高硬度钢

Drilling with carbide and HSS drills

硬质合金和高速钢钻头的钻削

Drilling in

- Stainless steel, HRSA
- Cast iron
- Difficult-to-machine tool steels and high-alloy steels
- High-strength, hardened steels

钻削:

- 不锈钢, HRSA
- 铸铁
- 难加工工具钢和高合金钢
- 高强度、高硬度钢

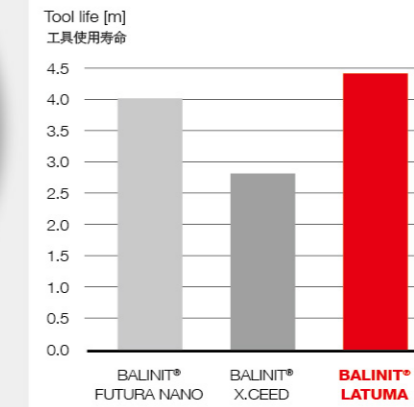
Convincing results with the use of BALINIT LATUMA coatings on indexable inserts and end mills

可转位刀片和铣刀上使用BALINIT LATUMA涂层的优异结果



Face milling in steel, dry

钢材平面铣削, 干切



Tool 工具

Carbide insert 硬质合金刀片
ADMT

Workpiece 工件

Steel 1.7225
(AISI 4140, SCM 440), 900 N/mm²

Cutting data 切削参数

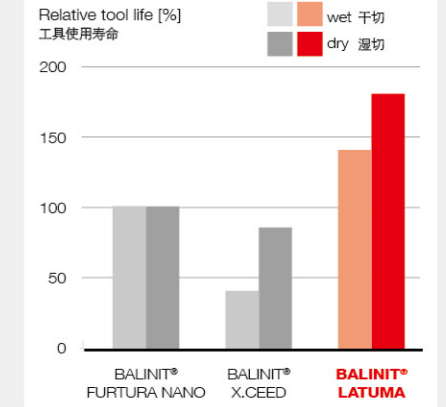
$v_c = 185$ m/min
 $f_t = 0.2$ mm/rev
 $a_p = 3$ mm
VB = 0.15 mm
dry 干切

Source 来源

Oerlikon Balzers cutting laboratory
欧瑞康巴尔查斯切削实验室

Turning in stainless steel, wet and dry

不锈钢车削, 干切、湿切



Carbide insert 硬质合金刀片
CNMG432

Steel 1.4571
(AISI 316Ti, SUS 316Ti)

$v_c = 180$ m/min
 $f_t = 0.25$ mm/rev
 $a_p = 2$ mm
VB = 0.25 mm
wet 湿切

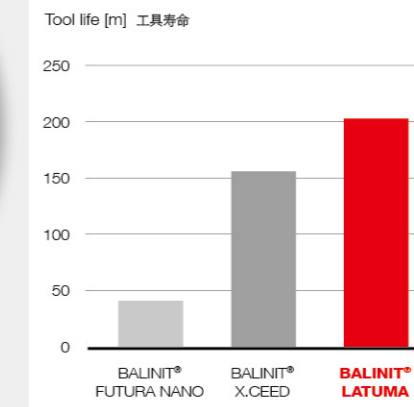
$v_c = 120$ m/min
 $f_t = 0.25$ mm/rev
 $a_p = 2$ mm
VB = 0.30 mm
dry 干切

Oerlikon Balzers cutting laboratory
欧瑞康巴尔查斯切削实验室



Milling in hot-working steel

热作钢铣削



Tool 工具

Carbide end mill, Ø 10 mm 硬质合金铣刀

Workpiece 工件

Steel 1.2344
(AISI H13, SKD61), 45 HRC

Cutting data 切削参数

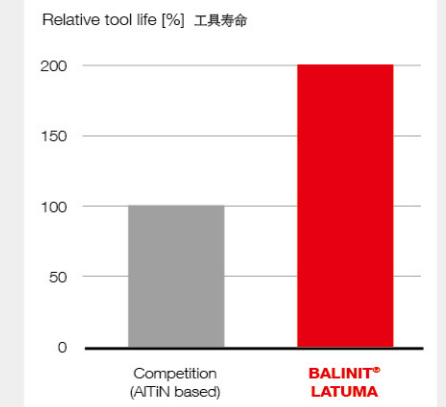
$v_c = 180$ m/min
 $f_t = 0.1$ mm/rev
 $a_p = 10$ mm
 $a_e = 0.5$ mm
VB = 0.10 mm
Emulsion 润滑油

Source 来源

Oerlikon Balzers cutting laboratory
欧瑞康巴尔查斯切削实验室

Drilling in steel

钢材钻削



Carbide drill, Ø 6,0 mm 硬质合金钻头

Steel 1.0503
(AISI 1045, S45C)

$v_c = 80$ m/min
 $f_t = 0.25$ mm/rev
 $L_D = 4xD$
VB = 0.15 mm

Emulsion 润滑油

Tool manufacturer
工具制造商