

耐腐蚀性 · 放电加工用超硬合金ME40

CORROSION-RESISTANT CEMENTED CARBIDE FOR EDM - ME40

耐腐蚀 · 耐放电加工用超硬合金

抑制放电加工时的损伤。

抑制水介质线切割放电加工中的腐蚀。

抑制冲压加工时由于冲击造成的缺口。

Corrosion-resistant cemented carbide

Damage reduction when EDM.

Corrosion reduction when WEDM (water type).

Crack reduction by impact in pressing process.



产品说明 Explanation

1. 水介质线切割时强度下降，有效抑制电解腐蚀
①随着WC粒径的优化，提高了水介质线切割后的抗弯强度。
②通过优化成分设计，改善了耐腐蚀性能。
 2. 从冲压时的切断性能考虑，设计了能抑制磨削时剥落。
(通过去除对剥落产生影响的粗粒径WC，有效改善了磨削时的耐剥落性)。
 3. 在不锈钢的冲压中，由于冲击会有破损，如果用KX01和WD20时发生破损的情况，用ME40对破损的防止也有效果。
1. Design to resist corrosion and strength decrease when WEDM (water type).
① Increased transverse rupture strength after WEDM (water type) by optimized WC grain.
② Improved corrosion-resistance by optimized component design.
 2. Design to resist chipping when grinding process so that cutting performance when pressing process is improved. (Improved chipping-resistance by exclusion of coarse grain WC which influences chipping problem.)
 3. Suitable material grade for crack resistance when crack problems are happened in KX01 or WD20 when pressing process of stainless parts.



用途/实例 Applications

长时间的水介质线切割放电加工模具用（特别是凹模）
采用线切割放电加工，当模具使用时会有一定程度的冲击，如果担心破损的话，可以使用。
采用湿式加工时担心发生腐蚀的问题时可以使用。
贮存时如果担心由于湿度影响而发生腐蚀的话，可以使用。

For WEDM (water type) processing in prolonged manufacturing. (Especially for Die)
Proceeded by WEDM has an issue regarding chipping in pressing process.
Concerned corrosion by wet type processing.
Concerned corrosion under humidity environment at storage, etc.

ME40物理性能

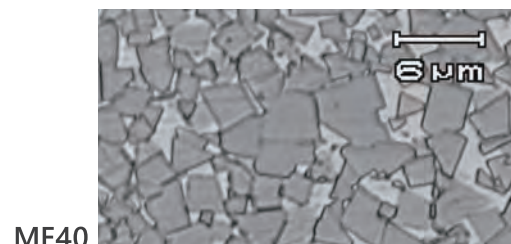
Physical property of ME40

本公司产品代号 Our grade	硬度 Hardness	抗弯强度 TRS	放电加工后的抗弯强度 TRS after WEDM
	HRA	[GPa]	[GPa]
ME40	88.0	3.2	2.3
参考 G5 Reference G5	88.0	3.2	2.2
参考 KD40 Reference KD40	88.0	3.7	1.9

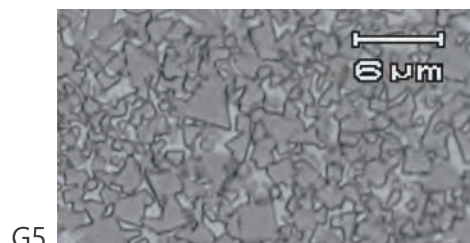
(代表值 / Typical figures)

组织图片

Micrographs



ME40



G5



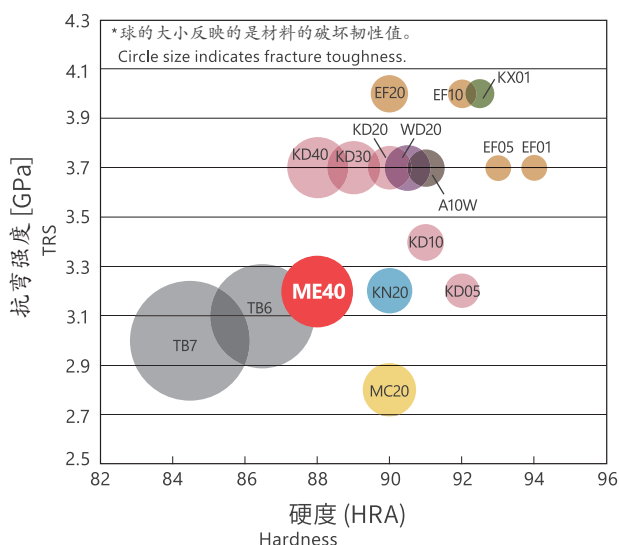
KD40

金属显微镜 (X1000)

By metallurgical microscope (×1000)

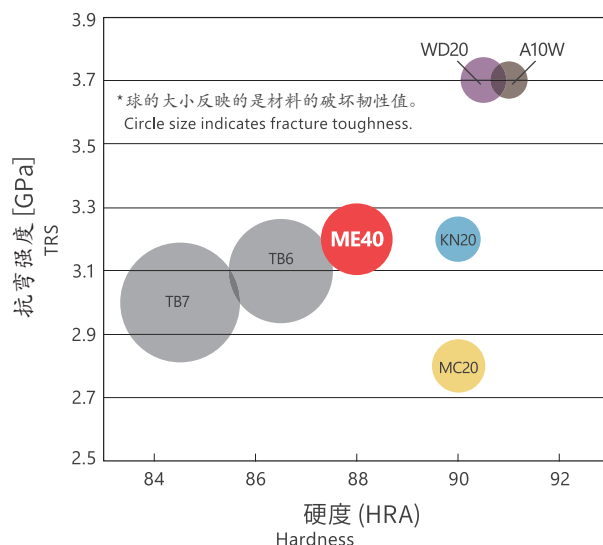
耐腐蚀硬质合金定位表

Positioning in corrosion-resistant cemented carbide



放电加工硬质合金定位表

Positioning in cemented carbide for EDM

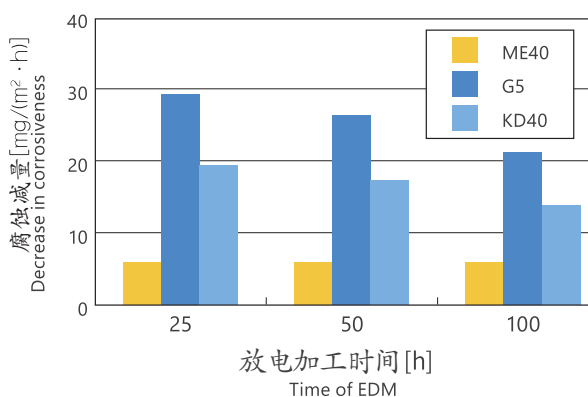


放电加工用ME40，具有良好地耐磨性和韧性。

ME40 has excellent balance of wear-resistance and toughness in cemented carbide for EDM.

耐腐蚀性能

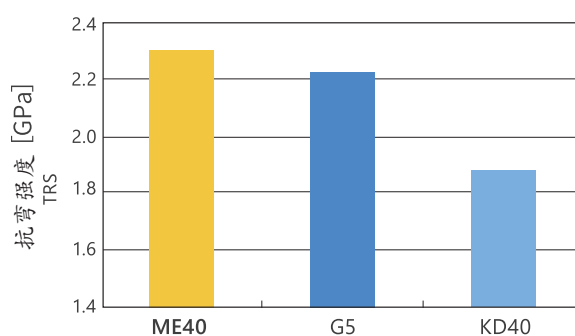
Performance of corrosion-resistance



ME40与其它硬度相同的材质相比，有更加出色的耐腐蚀性。
ME40 has excellent corrosion-resistance comparing to other grades which have same hardness.

耐放电加工性能 (放电加工后抗弯强度)

Performance comparison of TRS after WEDM

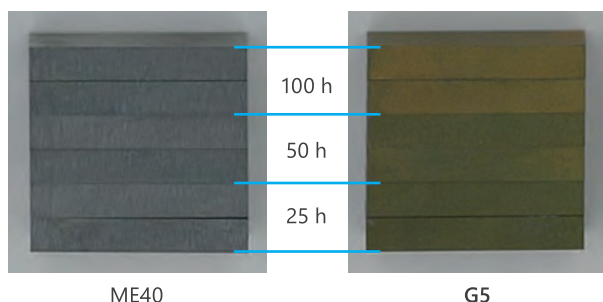


在相同的硬度的材料中，ME40在放电加工后，可以更有效的抑制强度下降。

ME40 restrains deterioration of strength after EDM comparing to other grades which have same hardness.

■ 腐蚀实验外观图

Appearance after corrosion test



对比G5变为茶褐色 (生锈状态)
而ME40没有变色。

ME40 keeps same color while G5 became dark brown. (G5 gets rusty)

ME40的耐腐蚀性是G5的5倍
Corrosion-resistance 500% up
对比G5
*Compared with G5