

Gtag

低碳型产品 Low Carbon Products





Gtag

减少碳足迹 (CFP) 的同时, 可降低供应链的排放量

Reduction of supply chain emissions leads to reduced carbon footprint of products (CFP)

Gtag 是工具制造生产过程中减少CO2排放量的低碳型产品

Gtag is a low carbon product that reduces CO₂ emissions during tool manufacturing

对应Scope 3类别1「购买的产品·服务」

Corresponds to Scope 3 Category 1 "Purchased Products and Services"

■为了实现碳中和 To achieve carbon neutrality

有必要在整个供应链中推进温室气体 (GHG) 排放量的削减。OSG提供长寿命化和高效率加工的产品,从而减少客户的 Scope2消耗。此外,我们推荐Gtag作为与客户Scope3相当的工具制造时减少CO2排放量的产品。

It is necessary to promote the reduction of greenhouse gas (GHG) emissions throughout the supply chain. OSG offers long tool life and high-efficiency machining solutions that lead to reductions in Scope 2 emissions for cutting tool users. In addition, we offer Gtag as a product that reduces CO₂ emissions during tool manufacturing, which corresponds to Scope 3 emissions for our customers.

供应链排放量



Scope1排放量

Scope1



Scope2

Scope2排放量



Scope3排放量

每个产品的CO。排放总量即为碳足迹 (CFP)

The total amount of CO₂ emissions per product is the carbon footprint of product (CFP)

客户

End Users

代表性项目





燃料的燃烧 电力的使用 **Fuel Combustion** Use of Electricity 主要是生产

下 游 Downstream 代表性项目 Scope3 客户销售产品的使用和报废 Use and Disposal of Products Sold by End Users

主要是客户销售产品的使用·报废·再利用

「绿色价值链平台」(环境部) (https://www.env.go.jp/earth/ondanka/supply_chain/gvc/estimate.html)编辑制作 Created based on the following sources: "Decarbonization Portal" (Ministry of the Environment) (https://ondankataisaku.env.go.jp/carbon_neutral/words/carbon-footprint.html) and "Green Value Chain Platform" (Ministry of the Environment) (https://www.env.go.jp/earth/ondanka/supply_chain/gvc/estimate.html)

■帮助减少切削工具CO₂的排放量 To help reduce CO₂ emissions from cutting tools 选择高性能的Gtag(低碳型产品)

Selection of high performance Gtag (low carbon products)

Scope3

购买的产品 Purchased Products

通过购买·使用Gtag,可减少CO2的

Reduce CO₂ emissions by purchasing and using Gtag products

Scope 2

用电量 Electricity Usage

通过刀具的长寿命化和高效率加工来提高生产 率,可以实现减少用电量

Reductions can be achieved by improving productivity through longer tool life and highly efficient machining

扫一扫 查看其他可减少CO₂ 排放量的环保型产品 Scan for other environmentally friendly products that can reduce CO₂







Gtag Scope3 CO2排放量减少的案例

Examples of Scope 3 CO₂ emission reduction



采用独特的新制造方法,通过减少制造时的耗电量,从而减少 CO_2 排放量

CO2 emissions are minimized by reducing power consumption during manufacturing through the adoption of a unique new manufacturing method

高性能・低碳型挤压丝锥

High-performance & Low-carbon Forming Tap

例) M6×1制造时

CO2排放量的减少率

Example) Comparison of reduction in CO_2 emissions during _ S' gXSUfgq(Y aX? (Å#



与以往产品相比减少35%

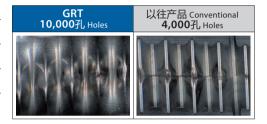
35% reduction versus conventional product

加工数据 Cutting Data

·优良的耐久性 Excellent durability

使用工具 Tool	GRT M6×1 2P	
加工材料 Work Material	S45C	
底孔 Drill Hole Size	φ5.52×20m (通孔) Through	
攻丝长度 Tapping Length	12mm	
切削速度 Cutting Speed	15m/min (796min ⁻¹)	
切削油剂 Coolant	水溶性切削油剂 无氯 20倍 Water-soluble Chlorine-free (5%)	
使用机械 Machine	立式加工中心(BT30) Vertical Machining Center	

加工孔数 Tapping Holes			
(0 5,000 10,000		
GRT	10,000 孔 Holes	磨损 Wear	
以往产品 Conventional	4,000 孔 Holes 磨损 Wear		



AD-2D Gtag 低碳型硬质合金钻头 Low-carbon Carbide Drill

例) 外径 ϕ 10制造时

CO2排放量的减少率 Example) Comparison of reduction in CO₂ emissions during manufacturing of outer diameter \$\phi\$10



31% reduction versus conventional product

■加工数据 Cutting Data

・确保与以往产品同等的性能 Same performance as conventional product

使用工具 Tool	AD-2D Gtag φ6	
加工材料 Work Material	SCM440 (30HRC)	
切削速度 Cutting Speed	70m/min (3,715min ⁻¹)	
进给速度 Feed	670mm/min (0.18mm/rev)	
加工深度 Depth of Hole	12mm (通孔) Through	
切削油剂 Coolant	水溶性切削油剂 无氯 20倍 Water-soluble Chlorine-free (5%)	
使用机械 Machine	卧式加工中心(HSK-A63) Horizontal Machining Center	

加工孔数 Number of Holes	3,000 ₹L Holes	
AD-2D Gtag		
以往产品 Conventional		

AE-VMS Gtag

低碳型硬质合金抗振铣刀

Low-carbon Anti-Vibration Short Carbide End Mill

例) 外径 ϕ 10 制造时

CO2排放量的减少率

Example) Comparison of reduction in CO₂ emissions during manufacturing of outer diameter ϕ 10



与以往产品相比减少30%

30% reduction versus conventional product

■加工数据 Cutting Data

・确保与以往产品同等的性能 Same performance as conventional product

使用工具 Tool	AE-VMS Gtag φ 10	
加工材料 Work Material	S50C (30HRC)	
切削方法 Milling Method	槽铣 Slot Milling	
切削速度 Cutting Speed	100m/min (3,200min ⁻¹)	
进给速度 Feed	840mm/min (0.066mm/t)	
切削深度 Depth of Cut	ap=10mm	
切削油剂 Coolant	气冷 Air-blow	
使用机械 Machine	立式加工中心(BT40) Vertical Machining Center	

加工孔数	加工30.8m时的磨损情况 Wear comparison after milling 30.8m	
Number of Holes	切削刃部 Cutting edge	前刃面 Rake face
AE-VMS Gtag		The same of the sa
以往产品 Conventional		



FREEN TAP GRT 高性能·低碳型挤压丝锥 High-performance & Low-carbon Forming Tap

•无切屑加工,提高生产率 Improves productivity with zero cutting chips

尺寸规格 Lineup

螺纹种类:M

Thread Type

 $M1\times0.25\sim M6\times1$







AD-2D Gtag 低碳型硬质合金钻头 Low-carbon Carbide Drill

•对应广泛的加工材料 Suitable for a wide variety of work materials

尺寸规格 Lineup

 ϕ 5 \sim ϕ 10







AE-VMS Gtag 低碳型硬质合金抗振铣刀 短刃型 Low-carbon Anti-Vibration Short Carbide End Mill

·采用不等导程、不等分割,实现稳定、高效率加工 Unequal spacing of teeth and variable-lead geometry enables stable and high efficiency milling

尺寸规格 Lineup

平头型 Square Type

 $\phi 3 \sim \phi 12$







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