

WiseSteel

SMART STEEL WELDING



WiseSteel



BOOST EFFICIENCY AND REDUCE SPATTER IN MILD STEELS

Optimized arc characteristics for different transfer modes make MIG welding of carbon steels easy and efficient with **WiseSteel**. For example, thanks to the intelligent control system, challenges related to the globular transfer are now tackled. This is achieved by alternating short arc transfer with spray transfer, which reduces spatter by up to 30%, increases travel speed, and produces high-quality welds characterized by regular fish-scale pattern. In short-circuit transfer, WiseSteel adaptively improves the arc stability, thus providing better out-of-position welding capabilities. Moreover, micropulsing of the current and voltage in spray transfer mode constricts the arc increasing travel speed by up to 30%.

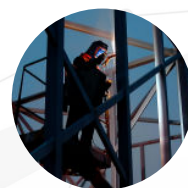
KEY APPLICATIONS



MECHANICAL
ENGINEERING



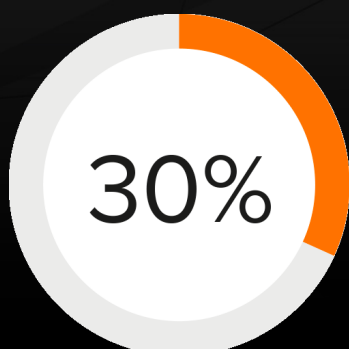
SHIPBUILDING



CONSTRUCTION



KEY BENEFITS



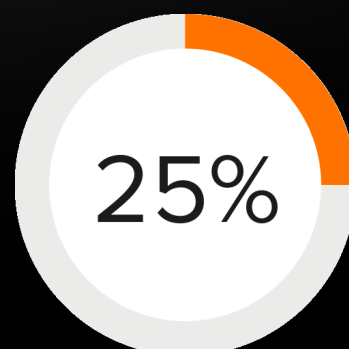
REDUCTION IN LABOR COSTS

Per welded meter compared to standard arc



REDUCTION IN GRINDING COSTS

Compared to standard MIG welding



SAVINGS IN STRAIGHTENING COSTS

Compared to standard MIG welding

BENEFITS

- Easier weld pool control in the PF position and precise heat input control on the weld pool sides, enabling higher travel speeds
- Less welding spatter and higher travel speed compared to standard globular arc welding
- High-quality welds with regular fish scale pattern in globular transfer mode
- In spray transfer mode, the welding speed increases and heat input decreases compared to standard spray arc welding because of precise micropulsing of the arc

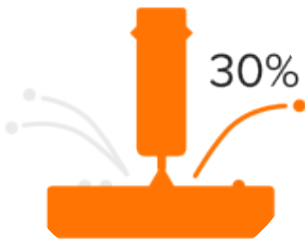


BENEFITS



LESS LABOR COSTS PER WELDED METER

Thanks to micropulsing of the current and voltage and to simultaneous adaptive regulation, which keeps the arc optimally short, WiseSteel provides up to 30% faster travel speed in spray transfer compared to the standard arc. Faster welding speed equals more welded parts or structures per shift, i.e. lower labor costs per welded meter.



SAVINGS IN GRINDING COSTS

WiseSteel in the globular transfer area significantly reduces spatter and thus post-weld grinding work compared to standard MIG welding. This is achieved by alternating short arc transfer with spray transfer to reduce the droplet size, enabling welding also in the vertical and overhead positions.



SAVINGS IN STRAIGHTENING COSTS

WiseSteel's high-energy-density arc produces narrow, deep penetrating welds requiring 75–80% of the heat input needed for a comparable penetration with standard MIG in spray transfer mode. The lower heat input results in less distortion, which decreases the need for time-consuming flame straightening work.

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Product code

X8500001

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Kemppi is the pioneering company within the welding industry. It is our role to develop solutions that make you win business. Headquartered in Lahti, Finland, Kemppi employs over 800 welding experts in 17 countries and has a revenue of more than 150 MEUR. Our offering includes welding solutions - intelligent equipment, welding management software and expert services - for both demanding industrial applications and ready-to-weld needs. Local expertise is available via our global partner network covering over 60 countries.

