

Head to Head

SilverPlus™ Electrode

New MAX200 electrode goes head to head with non-genuine competitors



Technology

Hypertherm's SilverPlus™ technology involves fusing a silver front-end onto a copper electrode base. The hafnium emitter interfaces with the silver, creating superior adhesion and cooling compared with a copper interface. This retards hafnium erosion as the electrode wears and allows the hafnium to erode to approximately twice the depth of an all-copper electrode.

Tests

We used two life tests to benchmark the SilverPlus electrode against its competitors. The first test involved piercing metal and cutting for 4 seconds. This "stitch" test measures the dramatic effect of repeated starts and stops. The next test involved piercing the plate and cutting for 60 seconds. This test reveals how an electrode stands up to the thermal stress of long-duration cutting. Both tests used Hypertherm's standard 200-amp oxygen cut parameters. The procedure was repeated until the electrodes no longer functioned.

Results

The 4-Second Test

The Hypertherm SilverPlus electrode lasted a phenomenal average of 1,233 4-second cuts (see upper right graph). The average number of 4-second cuts for the non-genuine consumables ranged from 339 to 626. The new MAX200 SilverPlus electrode lasted 2.0 to 3.6 times longer than the non-genuine electrodes.

The 60-Second Test

SilverPlus also demonstrated a clear advantage in the 60-second test averaging 627 cuts and nearly 11 hours (see lower right graph). The non-genuine competitors averaged between 255 and 449 cuts. Hypertherm's MAX200 SilverPlus electrode outlasted every non-genuine brand tested, delivering between 1.4 and 2.6 times as many starts.

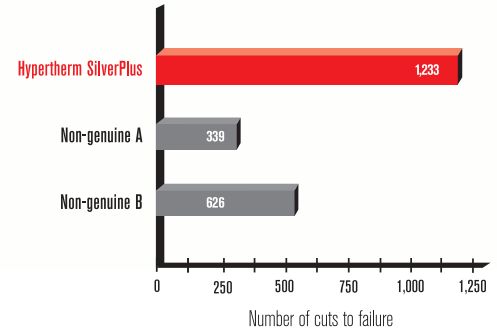
Summary

While these are lab tests and field results may vary, Hypertherm believes the outcome is clear: Under the same operating conditions, the SilverPlus electrode delivers significantly longer life than its non-genuine competitors. This translates into impressive savings on two fronts:

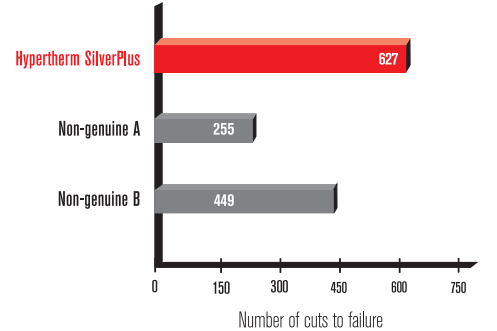
1. Fewer genuine Hypertherm parts are needed, saving consumable, transaction and inventory costs.
2. System downtime associated with consumable changeouts is reduced, increasing productivity and reducing the overall cost of cutting.



Benchmark Testing Results* (4-Second Cuts)



Benchmark Testing Results* (60-Second Cuts)



*Competitive electrodes tested were "extra life" versions, which also incorporate a silver/hafnium interface.

Hypertherm®
The world leader in plasma cutting technology™

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