

Special Plating for Automotive Parts of KANZACC

Whisker Free Plating Film “HYDRO-C2” for Connector of SRC

The HYDRO-C2 is a very good whisker free partial plating process used for the jointing terminal of the Steering Roll Connector (SRC). The whisker free plating film “HYDRO-C2” is plated on the fitting part to prevent generation of the whisker at the fitting part. By this plating film, the fitting part maintains the electrical property and the easiness of insertion and extraction.

On the other hand, the working part has no plating but is designed to inhibit the oxidization of the surface and to maintain a good workability of the welding.

Figure 1 shows the jointing terminal in the SRC. Figure



Figure 1 Joint terminal in the SRC.

2 shows the example of the whisker occurring on the surface of the plating. It is a mustache-shaped metal crystal and causes the electrical short.

Features

- The whisker free partial plating
- A good maintenance of the electrical property and the easiness of insertion and extraction
- A good maintenance of the weldability at the working part

Use application

The plating is used for the jointing terminal of SRC

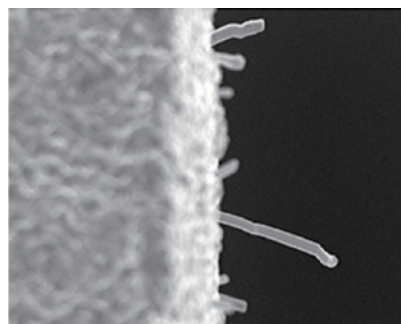


Figure 2 Example of the whiskers.

Abrasion Resistant Plating Film “GAN:coat” for Retainer of Connecting Rod

Abrasion resistant plating film GAN:coat has neither peeling off nor pollution of the engine oil because of no sulfurization by the engine oil, comparing with the copper plating or the silver plating. Since GAN:coat has also lower a dynamic friction coefficient compared to the copper plating or the silver plating, it has a good resistant to abrasion, and the coat is the most suitable in the surface plating of the retainer of the connecting rod.

Figure 3 shows the connecting rod and the retainer and Figure 4 shows the comparison of the abrasion loss and the dynamic friction coefficient between the GAN:coat



Figure 3 Connecting rod and retainer.

and the copper plating or the silver plating.

Features

- No peeling off because of absence of sulfurization by the engine oil
- Low dynamic friction coefficient and a good resistance to the abrasion

Use application

The plating for the bearing retainer of the connecting rod

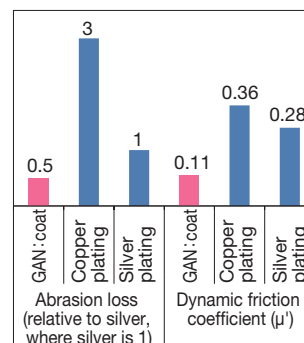


Figure 4 Comparison of the abrasion loss and the dynamic friction coefficient.

Abrasion Resistant Silver Plating Film “anga-U plus” for Charging Connector of EV

The anga-U plus is a new silver plating with resistance to cutting and abrasion as compared to the conventional silver plating. It is suitable in applications of EV charge connector requiring long term insertion-extraction. The anga-U plus maintains low contact resistance for a long term, because only a little abrasion is caused by repetitive insertion-extraction.

Thin plate film is possible because of the small abrasion loss of anga-U plus. This feature can greatly contribute to cost reduction.

The image of the charging connector of the male and female terminals plated with the anga-U plus is shown in Figure 5. Figure 6 shows the variation of the contact resistance

versus repeated insertions and extractions for the anga-U plus plated connector and for the conventional silver plated one.

The increasing of the contact resistance of the anga-U plus plated is smaller than the contact resistance of the conventional silver plated.

Features

- The contact resistance increase is low because of a good resistance to abrasion
- The cost reduction can be achieved because of the thinner plating

Use application

The plating for the charging connector



Figure 5 Image of charging connector.

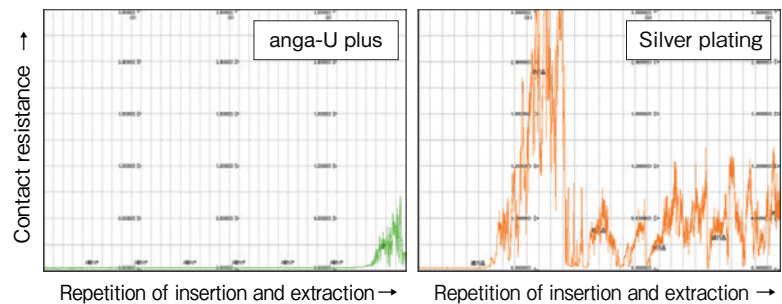


Figure 6 Variation of the contact resistance versus frequency of insertion and extraction.

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