



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Code for construction and acceptance of aluminium bus-bar
welding engineering**

铝母线焊接工程施工及验收规范

(English Translation)

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Appendix A Welding Joint Form of Aluminum Bus-bar

1.0.1

This code is formulated with view to unify welding technical requirements of aluminum bus-bar so as to realize safety and usability, advanced technology, economy and rationality as well as guaranteed quality.

1.0.2

This code is applicable to the construction and acceptance for the aluminum bus-bar welding project of aluminum electrolysis series.

1.0.3

The welder engaged in aluminum bus-bar welding must mount guard upon welder certificate.

1.0.4

The construction and acceptance of aluminum bus-bar welding engineering shall not only comply with the requirements stipulated in this code but also those in the relevant current national standards.

2.0.1 Aluminum bus-bar

The electric conductor made from aluminum material with relatively large sectional area to connect several circuits (hereafter referred to as bus-bar).

2.0.2 Welding wire

The metal wire serves as both filler metal and conductor during welding.

2.0.3 Short circuit joint

Two planes stress welded by bolt which can be connected or disconnected quickly without damaging bus-bar.

2.0.4 Quality

The extent to which a group of inherent characteristics meet the requirements.

2.0.5 Hard aluminum bus-bar

The aluminum bus-bar section with sufficient rigidity to maintain shape and dimension.

2.0.6 Soft aluminum bus-bar

The aluminum bus-bar section with the requirements to absorb the expansion and contraction or other dislocation of connected hard aluminum bus-bar in set direction.

2.0.7 Hard welding plate

The transition piece made of aluminum plate that connects aluminum bus-bars sections.

2.0.8 Flexible plate

The transition piece made of pure aluminum sheet that is easy for deformation.

2.0.9 Flexible bundle

The bunched component made from certain quantity of flexible plates spot-welded immediately after pressure formation.

2.0.10 Aluminum-steel transition welding plate

The transition component made of aluminum and steel plates compounded by explosion method with certain dimension and connection strength, which is used to solve the difficulty of direct welding of aluminum and steel in aluminum bus-bar welding engineering.

2.0.11 Aluminum-copper transition welding plate

The transition component made of aluminum and copper plates compounded by explosion method with certain dimension and connection strength, which is used to solve the difficulty of direct welding of aluminum and copper in aluminum bus-bar welding engineering.

2.0.12 Bus-bar joint

The generic term for all forms of welding between bus-bar sections.

2.0.13 Short circuit bus-bar

The bus-bar section that can separate or close a certain electrolytic pot from series composite circuit quickly.

2.0.14 Stress connection machine

The special product for short circuit joint.

2.0.15 Rectifying bus-bar

The DC bus-bar from rectifying substation to electrolytic plant.

2.0.16 End bus-bar

The bus-bar on both ends of electrolytic plant.

2.0.17 Passage bus-bar

The bus-bar temporarily connecting two electrolytic plants under the central passage of them.

2.0.18 Power inlet side bus-bar

The bus-bar connecting the first electrolytic pot of electrolytic series and the anode of rectifying bus-bar.

2.0.19 Power outlet side bus-bar

The bus-bar connecting the last electrolytic pot of electrolytic series and the cathode of rectifying bus-bar.

2.0.20 Pot end bus-bar

The bus-bar on the short side of electrolytic pot.

2.0.21 Pot side bus-bar

The bus-bar on the long side of electrolytic pot.

2.0.22 Pot bottom bus-bar

The bus-bar under the bottom of electrolytic pot.

2.0.23 Column bus-bar

In the adjacent two pots in electrolysis series, the component connecting the power outlet bus-bar of the former pot and the bus-bar over pot of the latter one.