

Development of an aluminum arc welding database and application to vehicle development

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Background

- Reducing weight of car body using light material such as aluminium is needed.
- Aluminum alloys have several manufacturing processes such as casting, extrusions and roll wrought.
- Multiple joining method suitable for each material is required.
- Arc welding was adopted as one of the joining method.

Summary

1. Many kinds of fatigue tests was needed for aluminum arc welding this database.
2. Development of multiple database files for each fatigue test was performed.
3. The Developed database has good correlation with component tests.
4. Batch procedure is established for automatically process multiple calculation and merging results.

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