Project 31 - Accumulative Roll Bonding of Al and Ti Sheets Toward Low Temperature Superplasticity

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Program Goal

Investigate enhanced superplasticity of ultra fine grained materials produced by accumulative roll bonding

Approach

Develop a process for accumulative roll bonding and determine microstructural mechanisms related to superplasticity

Benefits

Improved superplastic formability by means of reduced temperature and increased forming strain rates with reduce operating costs and prolong die life
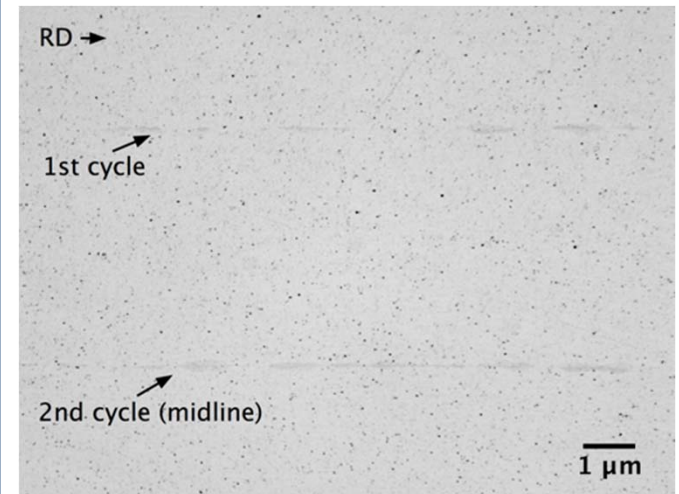
Bonding interfaces developed in Al 6061 after 2 roll bonding cycles

Project Duration
August 2017 to May 2021