

A Simplified Method for Ambient Temperature Production of Sheet Metal

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- Materials and Manufacturing

Keywords:

- Automotive
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- Metallurgical Engineering
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Researchers at Purdue University have demonstrated that large strain extrusion machining (LSEM) can be used to manufacture aluminum sheet metal at room temperature. This simplified process eliminates the need for homogenization and hot rolling of aluminum alloy. 600 micrometer as-cast aluminum crack free sheets were prepared in single step with LSEM at room temperature and had the same reduction in cold rolling as conventional methods. Experiments showed that LSEM strips are more rollable than warm rolled strips thereby requiring less passes during cold rolling.

Advantages:

Energy efficient production of sheet metal

Simplified production of sheet metal

Potential Applications:

Sheet metal production

Automotive manufacturing

Aeronautical manufacturing

People:

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Intellectual Property:

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