

## Accepted Manuscript

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### 3D-printed shell-truss sand mold for aluminum castings

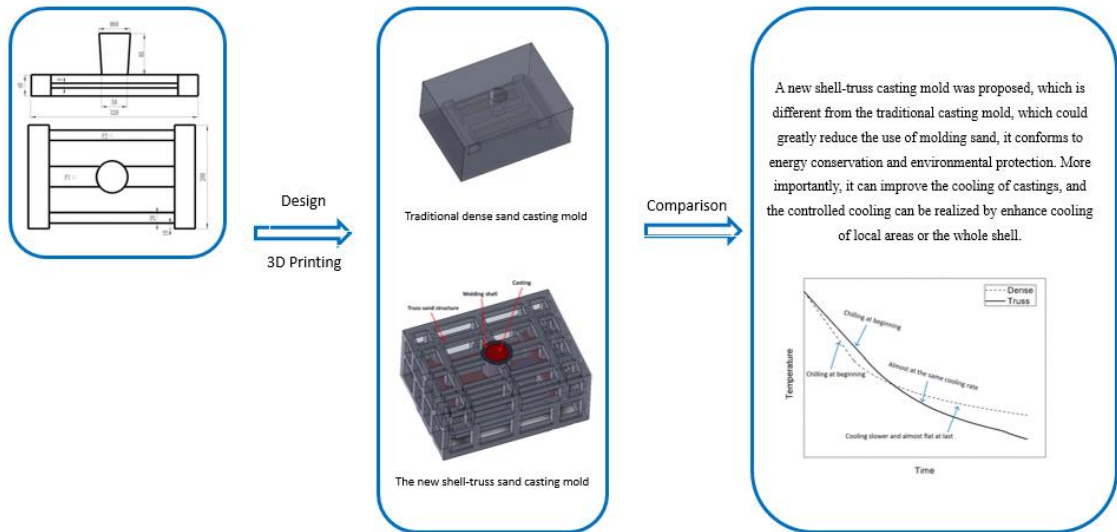
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#### Graphical abstract



#### Abstract:

A shell-truss sand mold is proposed to replace the traditional dense sand mold. The shell-truss sand mold combines a sand shell with supporting and reinforcing sand truss structures, which can be fabricated by 3D printing methods. It is possible to adjust the cooling conditions at specific locations of the mold. Fast and uniform cooling of a casting can be achieved, which can improve production efficiency and reduce deformation

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