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## **SESSION 2: SOLIDIFICATION AND CASTING, SALON B**

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# **Research of the metal flow picture in the upsetting based on computer and physical simulation**

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## **ABSTRACT**

The flow of metal in some of metal forming processes (rolling, pressing, and forging) is subjected to regularities, which determine the scheme of deformation in the upsetting metal samples.

The study aimed is research of the metal flow picture, which is the contour of the part, dividing lines of metal flow and flow lines.

We have created an algorithm for constructing of the metal flow picture, which is based on the representation of the dividing line of metal flow as equidistant.

Computer and physical simulation of the metal flow picture with the help of various software systems confirms the hypothesis put forward by.

**KEYWORDS:** metal forming, metal flow picture, dividing line of metal flow, flow line, computer simulation