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# Study on the influence of technological parameters on the friction stir butt welding process of pure copper plates

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**Abstract.** Friction stir welding - FSW is a relatively new welding process, which is increasingly used in industry, due to the advantages which it has in relation to conventional processes (by melting and adhesions). The advantages of the FSW welding process (as a solid phase welding process) are all the more obvious in the case of joining copper and its alloys, because they have a high melting temperature and high thermal diffusivity. The influence of the technological parameters of the process, the tool rotational speed and the welding feed, on the temperature and the axial force, as well as on the quality of the joint surface is presented. The study shows that the stabilization of the process takes place after a certain time from the beginning of the advance stage and highlighted the major influence of the tool rotational speed on the process temperature surface defects and the roughness of the joint surface.

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