

Press Hardening of Tubes with Additional Interior Spray Cooling

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Abstract : Press-hardened profiles are used e.g. for automotive applications in order to improve light weight construction due to the high reachable strength. The application of interior water-air spray cooling contributes to significantly reducing the cycle time in the production of heat-treated tubes. This paper describes a new manufacturing method for producing press-hardened hollow profiles by means of an additional interior cooling based on a water-air spray. Furthermore, this paper provides the results of thorough investigations on the properties of press-hardened tubes in dependence of varying spray parameters.

Keywords : 22MnB5, press hardening, water-air spray cooling, hollow profiles, tubes

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