

SAVING ENERGY IN THE INJECTION MOULDING PROCESS

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Injection moulding is one of most important manufacturing process for making industrial and domestic pieces. Injection moulding process involves the injection under pressure a melt of thermoplastic material inside a cavity of a mould. After cooling the mould is opened and the pieces is ejected. In injection molding are seven main stages: heating to the melting point of thermoplastic material, closed mould under pressure, injection the melt inside the cavity of mould, applied the packing and holding pressure, cooling the thermoplastic material, open the mould and demolding pieces from the mould. The greatest part of energy is consumed for electric drive and melting the thermoplastics. In figure 1 is present the place where is used energy in a injection moulding machine.

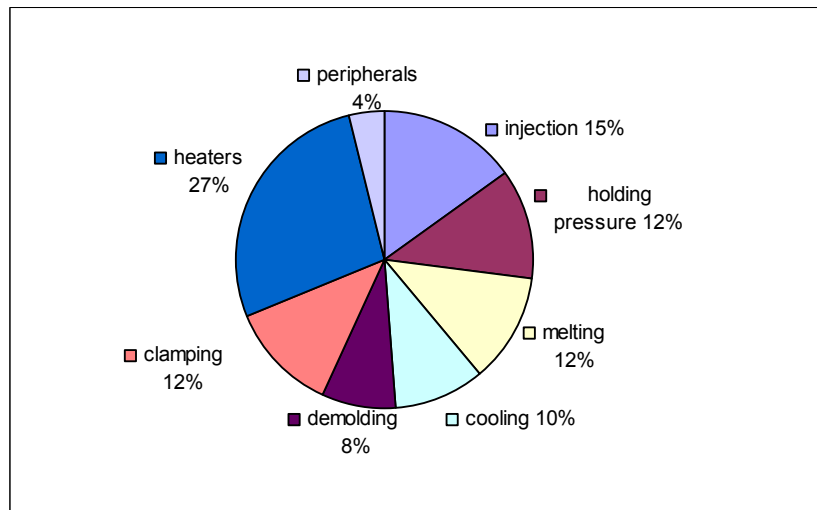


Fig.1. Energy consumption in injection molding process.

Knowing the place where the energy it's used, we can take the individual measure to reduce this. A high power is necessary for a short time for injection, holding, melting and demolding, and a low power, but for a long period for cooling the pieces.

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