

Application of Electron Scanning Microscope in the Analysis of the Structure of Casting Non-Conformities Aimed at Optimization of Technological Process Parameters

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The structural content of castings and non-conformities that might occur in pressure die casting is mainly connected with technological parameters. Analysis of the casting structure helps identify a group of causes of non-conformities which are connected with improper choice of technological parameters. The non-conformities identified in the pressure die castings discussed in the paper were analysed by means of metallographic examinations. A electron scanning microscope was used in the study for the analysis of the structure of casts. This analysis allowed for identification of the causes of e.g. shrinkage depressions or misruns. The analysis of the structure of a casting in the location of the depression revealed insufficient cooling time used for this casting.

Keywords: pressure die casting, non-conformities, AlSi alloys

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