

VISOKA ŠOLA ZA PROIZVODNO INŽENIRSTVO

DIPLOMSKO DELO

**UVEDBA HITREJŠE MENJAVE ORODJA ZA BRIZGANJE
PLASTIKE**

**INTRODUCTION OF A FASTER EXCHANGE OF MOULDS
FOR INJECTION MOULDING**

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POVZETEK

Namen diplomskega dela je skrajšati čas menjave orodij za brizganje plastike in posledično znižati stroške menjave orodij. S pomočjo metode SMED smo analizirali obstoječi postopek menjave izbranega orodja in ga poskušali izboljšati. Odločili smo se za uvedbo mehanskega načina za hitro vpenjanje orodij na obdelovalni stroj. Testno orodje smo ustrezno dodelali in tudi na stroju dogradili nove vpenjalne plošče in nov priklop temperirnega medija. Po uvedbi sprememb smo analizirali čase opravil, ki nastopijo pri izboljšani menjavi orodja, in na njihovi podlagi izračunali stroške menjave. Čas menjave orodja smo uspeli skrajšati za 74 %, stroške menjave orodja pa za 60 %.

Ključne besede: brizganje plastike, menjava orodij, metoda SMED

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SUMMARY

The goal of the thesis is to reduce the time to exchange moulds for injection moulding and thus reduce related costs. Using the SMED method the existing procedure of tool exchange was analysed and the possibilities to improve it were explored. It was decided to introduce a mechanic exchange process enabling rapid clamping of moulds onto the injection moulding machine. The test mould was modified and new clamping plates and new connectors for temperature control system were added to the injection moulding machine. After the introduction of changes the time for exchange of test mould using the improved exchange method was analysed and costs for mould exchange were calculated. The time to exchange the mould was cut by 74 % and the cost by 60 %.

Keywords: injection moulding, exchange of moulds, SMED method