

LIST OF TABLES

Table II.1 <i>L9</i> (34) Orthogonal Array	10
Table II.2 Design of Experiments: reported scheme (Bolboacă and Jäntschi, 2007)	
.....	11
Table II.3 Surface roughness values produced by the various manufacturing processes (Groover, 2010)	20
Table II.4 Similar Research.....	25
Table IV.1 Product Details.....	40
Table IV.2 Cutting Parameters and Levels	47
Table IV.3 Surface Roughness Measurement Result.....	47
Table IV.4 Taguchi's Orthogonal Array L_9 Design	48
Table IV.5 Orthogonal Array with Factors	48
Table IV.6 Signal to Noise Ratio Calculation.....	49
Table IV.7 Response Table for Signal to Noise Ratios	50
Table IV.8 Descriptive Statistics	54
Table IV.9 Kruskal-Wallis Test Result.....	54
Table IV.10 ANOVA One-way Test SNRA1 Versus Feed Rate	55
Table IV.11 ANOVA One-way Test SNRA1 Versus Depth of Cut.....	56
Table IV.12 Grouping Information Using Tukey Method and 95% Confidence .	58
Table IV.13 Grouping Information Using Tukey Method and 95% Confidence (Spindle Speed)	58
Table IV.14 Tukey Simultaneous Test for Differences Means (Spindle Speed)..	58
Table IV.15 Grouping Information Using Tukey Method and 95% Confidence (Feed Rate)	59
Table IV.16 Tukey Simultaneous Test for Differences Means (Feed Rate).....	59
Table IV.17 Grouping Information Using Tukey Method and 95% Confidence (Depth of Cut)	60
Table IV.18 Tukey Simultaneous Test for Differences Means (Depth of Cut)....	61
Table IV.19 Optimum Condition of Cutting Parameters	62
Table IV.20 Experiment and Prediction Condition	62