
LIST OF TABLES

Table 2. 1: ASTM designation system of magnesium alloy [18], [70].	22
Table 2. 2 Temper designation for magnesium alloy [18].....	23
Table 2. 3: List of some typical matrix materials [86], [88]–[90]	33
Table 2. 4: Some common reinforcements and their properties	36
Table 3. 1: The composition (% wt.)of commercial alloy AZ91	60
Table 4. 1: Different pats/ dimension and its specifications.....	72
Table 4. 2: Effect of a different mode of reinforcement addition with the decision	81
Table 5.1: Density and porosity measurements of AZ91 alloy and its composite (AZ91/SiC)	85
Table 5. 2: Vickers microhardness of magnesium alloy and its composite.....	91
Table 5. 3: The ultimate tensile strength and yield Strength	93
Table 5. 4: Ultimate Compressive strengths of AZ91 alloy and its composites.....	95
Table 5. 5: Parameters for the pin on disk dry sliding wear test.....	101
Table 5. 6: Summary of wear mechanisms for different combination of normal load, sliding speed and pin materials.	112
Table 6. 1: Density and porosity measurements of AZ91 alloy and its composite reinforced with TiC particulates	116
Table 6. 2: The average Vickers microhardness of magnesium alloy and its composite	123
Table 6. 3: The ultimate tensile strength and yield strength.....	124
Table 6. 4: Ultimate compressive strength of AZ91 alloy and its composites reinforced with different weight percent of TiC	126
Table 6. 5: Parameters for the pin on disk dry sliding wear test.....	131
Table 6. 6: Prediction of wear mechanisms for a different combination of normal load, sliding speed and pin materials.	140