Table 2 – Levels of input process parameters.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.No.** | **Factors** | | **Levels** | | |
|  | **Unit** | **1** | **2** | **3** |
| 1 | Electrolytes |  | NaCl | NaNO3 | CPE |
| 2 | Voltage | (V) | 6 | 7 | 8 |
| 3 | Duty cycle |  | 0.6 | 0.7 | 0.8 |
| 4 | Feed Rate | mm/min | 0.5 | 0.6 | 0.7 |

Table 3- Experimental outcomes of MRR, circularity, conicity and overcut for all Electrolytes

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Expt.No** | **Electrolyte** | **Voltage**  **(V)** | **Feed Rate**  **(mm/min)** | **Duty cycle** | **MRR**  **(g/min)** | **Circularity** | **Conicity** | **Overcut** |
| 1 | NaCl | 6 | 0.5 | 0.6 | 0.00026 | 0.008 | 1 | 0.663 |
| 2 | NaCl | 6 | 0.6 | 0.7 | 0.00034 | 0.003 | 0.375 | 0.7905 |
| 3 | NaCl | 6 | 0.7 | 0.8 | 0.000407 | 0.016 | 2 | 0.718 |
| 4 | NaCl | 7 | 0.5 | 0.7 | 0.00037 | 0.006 | 0.75 | 0.695 |
| 5 | NaCl | 7 | 0.6 | 0.8 | 0.00043 | 0.008 | 1 | 0.825 |
| 6 | NaCl | 7 | 0.7 | 0.6 | 0.00026 | 0.011 | 1.375 | 0.7205 |
| 7 | NaCl | 8 | 0.5 | 0.8 | 0.00039 | 0.019 | 2.375 | 0.8265 |
| 8 | NaCl | 8 | 0.6 | 0.6 | 0.00025 | 0.007 | 0.875 | 0.6445 |
| 9 | NaCl | 8 | 0.7 | 0.7 | 0.00037 | 0.001 | 0.125 | 0.9045 |
| 10 | NaNo3 | 6 | 0.5 | 0.6 | 0.00024 | 0.002 | 0.25 | 0.442 |
| 11 | NaNo3 | 6 | 0.6 | 0.7 | 0.00048 | 0.001 | 0.125 | 0.3895 |
| 12 | NaNo3 | 6 | 0.7 | 0.8 | 0.00007 | 0.004 | 0.5 | 0.26 |
| 13 | NaNo3 | 7 | 0.5 | 0.7 | 0.00006 | 0.006 | 0.75 | 0.031 |
| 14 | NaNo3 | 7 | 0.6 | 0.8 | 0.00012 | 0.004 | 0.5 | 0.237 |
| 15 | NaNo3 | 7 | 0.7 | 0.6 | 0.00029 | 0 | 0 | 0.523 |
| 16 | NaNo3 | 8 | 0.5 | 0.8 | 0.00018 | 0.006 | 0.75 | 0.467 |
| 17 | NaNo3 | 8 | 0.6 | 0.6 | 0.00036 | 0.002 | 0.25 | 0.515 |
| 18 | NaNo3 | 8 | 0.7 | 0.7 | 0.00012 | 0.003 | 0.375 | 0.1 |
| 19 | CPE | 6 | 0.5 | 0.6 | 0.044 | 0.008 | 0.75 | 0.467 |
| 20 | CPE | 6 | 0.6 | 0.7 | 0.037 | 0.004 | 0.004 | 0.125 |
| 21 | CPE | 6 | 0.7 | 0.8 | 0.048 | 0.009 | 1.25 | 0.035 |
| 22 | CPE | 7 | 0.5 | 0.7 | 0.084 | 0.068 | 0.85 | 0.141 |
| 23 | CPE | 7 | 0.6 | 0.8 | 0.077 | 0.025 | 3.125 | 0.04 |
| 24 | CPE | 7 | 0.7 | 0.6 | 0.0474 | 0.002 | 0.25 | 0.156 |
| 25 | CPE | 8 | 0.5 | 0.8 | 0.0477 | 0.009 | 1.125 | 0.077 |
| 26 | CPE | 8 | 0.6 | 0.6 | 0.059 | 0.004 | 0.5 | 0.208 |
| 27 | CPE | 8 | 0.7 | 0.7 | 0.065 | 0.019 | 2.375 | 0.044 |