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<td>5.46</td>
<td>Experimental surface roughness (Ra) and Regression predicted Surface roughness (Ra) values</td>
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<td>Experimental Power consumed values and Regression predicted Power consumed values</td>
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<td>Experimentally measured versus ANN computed Ra for four factors</td>
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<td>Experimentally measured versus ANN computed MRR for four factors</td>
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<td>5.51</td>
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<td>5.53</td>
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<td>Comparison between GA and ANN measured values for Power Consumed (PC)</td>
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<tr>
<td>Abbreviation</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td></td>
</tr>
<tr>
<td>AA</td>
<td>Arithmetical average</td>
<td></td>
</tr>
<tr>
<td>AISI</td>
<td>American Iron and Steel Institute</td>
<td></td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>Aluminium oxide</td>
<td></td>
</tr>
<tr>
<td>ANN</td>
<td>Artificial Neural Networks</td>
<td></td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Carbides</td>
<td></td>
</tr>
<tr>
<td>CBN</td>
<td>Cubic Boron Nitride</td>
<td></td>
</tr>
<tr>
<td>CLA</td>
<td>Central Line Average</td>
<td></td>
</tr>
<tr>
<td>CrC</td>
<td>Chromium Carbide</td>
<td></td>
</tr>
<tr>
<td>CrN</td>
<td>Chromium Nitride</td>
<td></td>
</tr>
<tr>
<td>CVD</td>
<td>Chemical Vapour Deposit</td>
<td></td>
</tr>
<tr>
<td>Doc or (d)</td>
<td>Depth of cut in mm</td>
<td></td>
</tr>
<tr>
<td>DOE</td>
<td>Design of Experiments</td>
<td></td>
</tr>
<tr>
<td>(f)</td>
<td>Feed mm/rev</td>
<td></td>
</tr>
<tr>
<td>GA</td>
<td>Genetic Algorithm</td>
<td></td>
</tr>
<tr>
<td>Lm</td>
<td>Mean line</td>
<td></td>
</tr>
<tr>
<td>Lu</td>
<td>Upper surface line</td>
<td></td>
</tr>
<tr>
<td>MR</td>
<td>Material Removal in Kgs</td>
<td></td>
</tr>
<tr>
<td>MRR</td>
<td>Material removal rate Kg/m³</td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td>Power Consumed in Watts</td>
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<tr>
<td>PVD</td>
<td>Physical Vapour Deposit</td>
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</tr>
<tr>
<td>Ra</td>
<td>Surface Roughness in (\mu m)</td>
<td></td>
</tr>
<tr>
<td>Rp</td>
<td>Leveling Depth or Depth of smoothness</td>
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</tr>
</tbody>
</table>
RSM - Response Surface Methodology
S - Speed in rpm
Sr - Strength factor
S/N or SN ratio - Signal to Noise ratio
Si₂O - Silicon dioxide
Si₃N₄ - Silicon Nitride
TiC - Titanium Carbide
TiCN - Titanium nitride
TiN - Titanium nitride
TiO₂ - Titanium oxide
v - Velocity in m/min
W - Weights (Randomly Selected Weights)
W₂C - Tungsten carbide
WC - Tungsten carbide