## LIST OF SYMBOLS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<tbody>
<tr>
<td>α-decay</td>
<td>Alpha decay (Removal of helium nucleus from radioactive daughter product)</td>
</tr>
<tr>
<td>β-decay</td>
<td>Beta decay (Removal of an electron from the radioactive daughter product)</td>
</tr>
<tr>
<td>γ-decay</td>
<td>Gamma decay (Removal of electromagnetic radiation from radioactive daughter product)</td>
</tr>
<tr>
<td>α-uranium</td>
<td>Room temperature allotrope of uranium (Stability range (Room Temperature to 668 °C))</td>
</tr>
<tr>
<td>β-uranium</td>
<td>Allotrope of uranium (Stability range (668 °C to 775 °C))</td>
</tr>
<tr>
<td>γ-uranium</td>
<td>High temperature allotrope of uranium (Stability range 775 °C to 1132 °C)</td>
</tr>
<tr>
<td>μm</td>
<td>Micron (1 micron = 10^{-6} meter)</td>
</tr>
<tr>
<td>Al</td>
<td>Aluminium</td>
</tr>
<tr>
<td>A</td>
<td>Amperes</td>
</tr>
<tr>
<td>BSE Image</td>
<td>Back Scattered Electron Image</td>
</tr>
<tr>
<td>BCC</td>
<td>Body Centered Cubic Structure</td>
</tr>
<tr>
<td>DU</td>
<td>Depleted Uranium (U^{235} &lt; 0.7%)</td>
</tr>
<tr>
<td>DC</td>
<td>Direct Current Source</td>
</tr>
<tr>
<td>EU</td>
<td>Enriched Uranium (U^{235} ≥ 2%)</td>
</tr>
<tr>
<td>EPMA</td>
<td>Electron Probe Micro Analysis</td>
</tr>
<tr>
<td>FCC</td>
<td>Face Centered Cubic Structure</td>
</tr>
<tr>
<td>HEU</td>
<td>High Enriched Uranium (U^{235} ≥ 20%) for use in weapon grade U^{235} ≥ 85%)</td>
</tr>
</tbody>
</table>
\( h \)  
**Hours**

**ID**  
**Inner Diameter**

**I/M**  
**Induction Melting Route**

**ID**  
**Internal Diameter**

**KW**  
**Kilo Watt**

**LEU**  
**Low Enriched Uranium (U^{235} < 20%)**

**MW(th)**  
**Mega Watt Thermal (Thermal Reactor Power)**

**MW(e)**  
**Mega Watt Electrical (Electrical Reactor Power)**

**MeV**  
**Million Electron Volt**

**Mo**  
**Molybdenum**

**OD**  
**Outer Diameter**

**P/M**  
**Powder Metallurgy Route**

**Pu**  
**Plutonium**

**RERTR**  
**Reduced Enrichment in Research and Test Reactor Programme**

**SEM**  
**Scanning Electron Microscopy**

**SE Image**  
**Secondary Electron Image**

**Si**  
**Silicon**

**SEU**  
**Slightly Enriched Uranium (0.7%<U^{233} <2.5%)**

**SS**  
**Stainless Steel**

**U**  
**Uranium**

**V**  
**Volts**

**XRD**  
**X-ray Diffraction**

**Zr**  
**Zirconium**