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<p>(51) International classification :C08J0005000000, C22C0001100000, C22C0032000000, C04B0018080000, C22C0001040000</p> <p>(86) International Application No :NA Filing Date :NA</p> <p>(87) International Publication No : NA</p> <p>(61) Patent of Addition to Application Number :NA Filing Date :NA</p> <p>(62) Divisional to Application Number :NA Filing Date :NA</p>	<p>(71)Name of Applicant : 1)Mr. Lalit Pathak Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 -----</p> <p>2)Dr. Vaibhav Trivedi 3)Mr.Mayank Bharadvaj 4)Ms. Bhavana Singh 5)Mr. Ayush Saxena 6)Mr. Prashant Kumar 7)Mr. Arvind Chaudhary 8)Mr. Ankit Chauhan 9)Mr. Mohammad Javed 10)Mr. Prashant Gupta Name of Applicant : NA Address of Applicant : NA</p> <p>(72)Name of Inventor : 1)Mr. Lalit Pathak Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 -----</p> <p>2)Dr. Vaibhav Trivedi Address of Applicant :Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 MORADABAD -----</p> <p>3)Mr.Mayank Bharadvaj Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 MORADABAD --</p> <p>4)Ms. Bhavana Singh Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 Moradabad -----</p> <p>5)Mr. Ayush Saxena Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 24400 Moradabad -----</p> <p>6)Mr. Prashant Kumar Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 Moradabad -----</p> <p>7)Mr. Arvind Chaudhary Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 Moradabad -----</p> <p>8)Mr. Ankit Chauhan Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 Moradabad -----</p> <p>9)Mr. Mohammad Javed Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 Moradabad -----</p> <p>10)Mr. Prashant Gupta Address of Applicant :Assistant Professor, Mechanical Engineering, IFTM University, NH9, Lodhipur Rajput, Delhi Road, Moradabad, Uttar Pradesh, Pin Code: 244001 Moradabad -----</p>
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(57) Abstract :

The invention relates to the fabrication of fly ash reinforced aluminum metal matrix composites using a stir casting method. The fly ash from thermal power plants is used as a sustainable reinforcement to improve mechanical properties. The resulting composite exhibits improved tensile strength and hardness, with microstructural analysis confirming uniform particle distribution. The process is environmentally beneficial, cost-effective, and industrially scalable

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