

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511043071 A

(19) INDIA

(22) Date of filing of Application :03/05/2025

(43) Publication Date : 23/05/2025

(54) Title of the invention : AN INLINE RESIN INFUSION DEVICE FOR CONTINUOUS COMPOSITE MANUFACTURING

(51) International classification :B29C0070540000, B29C0070440000, C21C0007100000, G02B0006380000, B29B0015120000

(86) International Application No :NA  
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA  
Filing Date :NA

(62) Divisional to Application Number :NA  
Filing Date :NA

(71)Name of Applicant :

**1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY**

Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. -----

**Name of Applicant : NA**

**Address of Applicant : NA**

(72)Name of Inventor :

**1)Dr. ABHISHEK PRATAP SINGH**

Address of Applicant :Department of Mechanical Engineering, Noida Institute of Engineering & Technology, Greater Noida. Greater Noida -----

(57) Abstract :

An inline resin infusion device (100) for continuous composite manufacturing comprises a resin reservoir (101), inline heater (102), vacuum degassing chamber (103), flow regulation valves (104), and a fiber contact chamber (108). The device features real-time temperature (106) and pressure (107) sensors for dynamic process control, ensuring consistent resin wet-out and defect-free composite formation.

No. of Pages : 13 No. of Claims : 5