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(71)**Name of Applicant :**
1)Kaushik Rathan S
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Panimalar Engineering College, Chennai - 600123 ---------- ----------
2)Mr. Jeswin Arputhabalan
3)Dr. V Gopal
4)Mr. Itha Veeranjaneyulu
5)Dr. Anish Mariadhas
6)Mr. M. Karthe
7)Dr. A. Rajendra Prasad
Name of Applicant : NA
Address of Applicant : NA
(72)**Name of Inventor :**
1)Kaushik Rathan S
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Panimalar Engineering College, Chennai - 600123 ---------- ----------
2)Mr. Jeswin Arputhabalan
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Sri Sairam Institute of Technology, Chennai-600044 ---------- ----------
3)Dr. V Gopal
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, KCG College of Technology, Karapakkam, Chennai-600097 ---------- ----------
4)Mr. Itha Veeranjaneyulu
Address of Applicant :Sr. Assistant Professor, Department of Mechanical Engineering, Aditya Engineering College, Surampalem, Kakinada ---------- ----------
5)Dr. Anish Mariadhas
Address of Applicant :Assistant Professor, School of Mechanical, Sathyabama Institute of Science and Technology, Chennai, 600119 ---------- ----------
6)Mr. M. Karthe
Address of Applicant :Assistant Professor, Department of Mechanical Engineering, M.Kumarasamy College of Engineering, Karur - 639113 ---------- ----------
7)Dr. A. Rajendra Prasad
Address of Applicant :Professor, Department of Mechanical Engineering, Sri Sai Ram Engineering College, Chennai - 600044, Tamil Nadu, India ---------- ----------

(57) Abstract :
[029] The present invention discloses an assembly with mechanical failure detection of selectively laser melted components constructed on-site and method thereof. The assembly includes, but not limited to, a failure analysis of the thin-walled cover is performed, and the cover's surface is handled; the endoporus of the cover is fastened using a frock, which allows the cover to maintain its stress level regardless of the frock's circular adjustment; optimise processing parameter, perform laser melting coating based on failure analysis of thin-walled cover; while laser melting coating, additional positions outside of the location to be repaired are cooled off. Further, the preset powder feeding mode includes using a laser with a power output of 1500W to 1900W, an absolute height of 260mm to 275mm, a spot size of 10mm 1.8mm, a sweep velocity of 110mm/min to 130mm/min, a lap size of 6.5mm, and a powder sending quantity of 12g/min to 18g/min. Accompanied Drawing [FIG. 1-2]

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