The SIS process improvement

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Project results:
1- Lab development: Since the time this research was funded, many lab development activities have been done. A room with basic utilities (e.g., Water, Power, and Internet) was permanently assigned to this research. Also all needed development and test equipment, tools, and materials were purchased and placed in the lab.

2- Students involvement: A group of 4 interested students voluntarily joined the research team since January 2004. With their help first Heater was designed and prototyped. Starting Fall 2004, 4 more new students, including one graduate student with computer science background and 3 senior students in Manufacturing Engineering major joined the research team. Graduate student worked on simulation application to design heaters with optimum pattern. 3 manufacturing engineering students helped the PI in design, prototype, and test of different types of heaters and heat masking systems.

3- Publications: First outcome of this research is the following paper presented in a peer reviewed conference:
Asiabanpour, B., Wasik, F., Cano, R., Jayapal, V., VanWagner, L., McCormick, T.,"New waste-saving heater design for the SIS Rapid Prototyping Process", IERC Conference, May 14-17 2005, Atlanta, GA.
Also, abstract for the following peer reviewed conference paper has been accepted and the full paper is under writing process:
Asiabanpour, B., Cano, R., VanWagner, L., McCormick, T., Wasik, F., Jayapal, V., "New Design for Conserving Polymer Powder for the SIS Rapid Prototyping Process", 16th International Solid Freeform Fabrication (SFF) Symposium, August 1-3 2005, Austin, TX.
In addition, it is planned a journal paper (in Journal of Rapid Prototyping) to be submitted by the end of summer 2005.

4- Future direction: With a solid progress, we are hopeful to attract funding from external resources such as NSF and non-governmental resource especially S&F company that is currently working on the SIS process commercialization.