

An Update to the Paper

SELECTING THE “BEST BUY” COATINGS REMOVAL PROCESS

BACKGROUND: I initially authored and presented the paper, *SELECTING THE “BEST BUY” COATINGS REMOVAL PROCESS*, at the Annual International Solvent Substitution Conference in Phoenix, Arizona in 1997. At that time I was employed by McDonnell Douglas Aerospace - East as program manager for the FLASHJET® Coatings Removal Process Technology.

Subsequent to the initial presentation of this paper, McDonnell Douglas and the FLASHJET® Process were acquired first by the Boeing Company (as part of a corporate merger), and then most recently in December, 2001 by Flash Tech, Inc. The entire FLASHJET® Technology engineering team and I terminated our employment with Boeing at that time to join Flash Tech, Inc.

During the ensuing years since this paper was written, there have been many changes within the paint stripping community as a whole and in particular with the FLASHJET® Coatings Removal Process or the “Flashlamp/Carbon Dioxide (CO₂) Pellet Blasting” process. Of significance is the fact that the four “Front Runners” are still just that, and that the two pulsed light energy processes are emerging as the most desirable paint stripping processes particularly with respect to Environmental Compliance and versatility. The past five years have also validated ever more vividly that the precepts offered in the paper are right on target. Likewise, the past five years have resulted in lessons learned which mandate some “updates” to the paper:

1. Within the section titled “Requirement for a Dedicated Stripping Facility” it states that the flashlamp/CO₂ pellet blasting process can be implemented out-of-doors. That statement is only partially correct. While the subject process can function out-of-doors during fair weather, that would certainly not be the case in the event of rain or freezing temperatures. And, the equipment would certainly have to be weather-proofed to withstand those conditions. The implication of the statement is, therefore, misleading and this correction is required.
2. Laser paint stripping addressed only pulsed CO₂ lasers and that was valid at that time. Since then several different types of lasers have emerged as viable paint stripping tools. Lasers per se are being recognized more and more as applicable to parts stripping and as a complementary process to the FLASHJET® Coatings Removal Process. Low power hand held lasers are now a reality and appear to provide an excellent “finishing” process for those areas inaccessible to the FLASHJET® stripping head.

3. Wheat starch blasting held a lot of promise early on and several systems were installed at government facilities. Strip rates were slower than expected, however, and other issues such as substrate damage, media penetration, and volume of waste disposal have all combined to limit its acceptance as the ideal way to remove mold line surface coatings.
4. "Non-Hap" chemicals have met with mixed success. Several are very effective when formulated and applied to aircraft on which the paint type is specifically known and on which the paint film is fairly thin (4 to 6 mils). On aircraft with multiple paint systems or unknown formulations the process can be very slow requiring multiple applications and extremely long dwell time in an elevated temperature (90+degrees F) facility or in some cases may not soften the paint/primer at all. Finally, though the chemical stripper itself may not constitute a hazardous air pollutant or be a known cancer causing agent, the stripped coating waste must be considered hazardous, especially if it contains zinc chromate primer - a known carcinogen.

Taking into account the "updates" listed above, the "Paper" still (perhaps even more) provides excellent guidelines when faced with choosing a paint stripping technology.

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