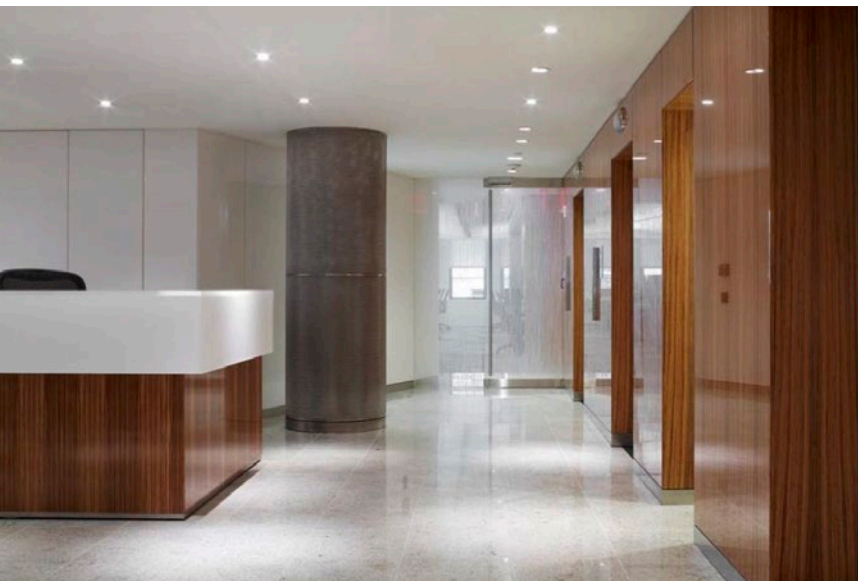


High-Quality High-Gloss



BY SUZANNE VAN GILDER

In the upper echelons of North American design, high-gloss is less of a trend and more of a reflection of status. For nearly 30 years Claudio and Flori Grottoli have provided a specialized paraffinated-polyester high-gloss finish for elite clients nationwide, from Steinway & Sons to Gensler Architects. Cavalieri Finishing, a small, 13-person operation, blends the fine traditional craftsmanship learned by Claudio as a young man in Italy, with the most up-to-date equipment and material technologies. Although Cavalieri has the capabilities to do polyurethane finishing as well, paraffinated-polyester is truly their niche, and for good reasons. “It is a difficult finish to work with,” says Flori Grottoli. “But the end product is more than just highly reflective and LEED compliant, it is the most chemical and mechanical resistant finish available.”

For context, F. Grottoli describes how different finishes can be classified by the amount of solid material left on a piece after it comes out of the spray gun. “A typical nitrocellulose lacquer is around 30-35 percent solid, meaning that the balance is emitted as VOCs. Polyurethane is higher; maybe 60 percent is solid material. In the case of polyesters, it is 96-99 percent solid, which makes the material layer heavier than other finishes and makes for a stronger molecular bond.” Of course, the application process is just as important as the material itself when it comes to achieving unsurpassed sheen and durability.

HIGH-CLASS QUALITY

Cavalieri is not the only company to offer polyester finishing. In fact, many of their clients do some degree of polyester finishing in-house. What sets Cavalieri apart is the type of material used, the process and the equipment. “What most people represent as a polyester finish is actually a polyester primer with a polyurethane top coat. This process makes sanding and polishing easier but the end result is less glossy, less durable and inferior in quality,” says F. Grottoli. “When we represent a polyester finish, we provide a finish that is polyester through-and-through; starting with a polyester primer and ending in a paraffinated polyester topcoat. Cavalieri works in both clear finish over wood veneer, and high-gloss over MDF that can be custom formulated to virtually any color.



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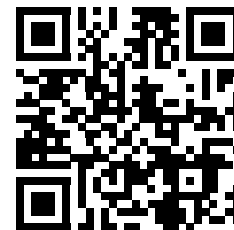
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Midhattan Woodworking Corp. is a third generation manufacturer and installer of interior architectural woodwork in the New York Metropolitan area. Located in Old Bridge, New Jersey, Midhattan's 80-year legacy of excellence frequently results in the company being awarded high-profile projects. "We recently worked with Cavalieri on a couple of projects for Gensler Architects, including the offices of a large real estate concern in New York City," says Steve Goldberg, Senior Account Executive for Midhattan. The reception area features a sizable fish tank enclosure built into white high-gloss and macassar ebony panels. "When people call upon us to do high-gloss we work with Cavalieri to achieve it because polyester is the hardest finish applied to wood. And it is also LEED compliant. So it makes us look good," says Goldberg. "We have a very large finishing capacity in-house, but if we were to attempt high-gloss finishing it would be so time-consuming and labor-intensive that it would tie up our facility. In this market things have to happen very quickly. Cavalieri has custom machinery and technology to expedite the finishing. And certainly their quality is second to none."

Every step in Cavalieri's process is executed within a carefully controlled environment. Contamination and variations in temperature or moisture pose the biggest threats to a pristine, high gloss finish. Pieces are meticulously calibrated and cleaned prior to receiving the barrier and primer coats, with sanding in between each step. The polyester is then applied using a paraffin wax whose purpose is to inhibit oxygen from coming in contact with the surface. This initiates the isothermal reaction that cures the polyester. "This is where we are different from everyone else," says F. Grottoli. The paraffinated polyester topcoat used by Cavalieri is imported directly from the manufacturer and is modified to suit Cavalieri's needs. It is a proprietary formula. Finished pieces can typically be sanded in 24 hours, but to achieve the highest quality finish, Cavalieri likes to leave pieces for one week in shrinking before the final calibration which removes the paraffin residue and allows the polishing process to bring out the extremely durable, brilliant, high gloss finish.

TECHNOLOGY AND CRAFTSMANSHIP

Claudio Grottoli learned his trade finishing pianos, a market still served by Cavalieri today. The nature of the instrument requires consistent quality regardless of the shape of the piece, which has driven Cavalieri to develop competencies in both hand and automated finishing. To meet the needs of their clientele (which also includes manufacturers of custom furniture, yacht and personal aircraft interiors, commercial spaces, display fixtures and more) Cavalieri produces

between 2000 and 3000 square feet of finished material per week. Flat panels are processed with automated finishing equipment; curtain coater, sander and polisher that have been re-engineered to perform multiple functions. "None of the machinery in my business is standard," says F. Grottoli, "because it is more cost effective to work with the machinery manufacturers to modify the equipment than to buy multiple machines." The same level of excellence is achieved for three-dimensional pieces via hand spraying, sanding and polishing by a staff of dedicated craftsman in Cavalieri's 15,000 square foot facility. The ability to produce large panel projects, as well as small, highly custom products, without compromising quality, gives Cavalieri a unique flexibility in production.

With a history dating back to the 1850's, Steinway & Sons is one of Cavalieri's customers that shares an appreciation for the tradition of quality craftsmanship. Michael Mohr is the Manufacturing and Production Manager for Steinway & Sons. Mohr oversees the entire assembly operation, a process that includes eight different departments and a few hundred people. "Steinway & Sons started making pianos in New York in the 1850s. A second factory started producing pianos in Hamburg, Germany 30 years later," says Mohr. "Typically in Europe the demand for finishes has been much more high-polish in nature. And on this side of the world the tradition has been hand-rubbed satin finish. But the world is becoming a smaller place, and we are becoming more global in manufacturing. At Steinway, we have seen an increased demand for high-gloss finishes State-side over the past 10-12 years." In response, Steinway is increasing its in-house polyester capabilities, but still relies on Cavalieri to keep up with demand and for specialty finishes. "High-gloss polyester is the best finish for concert pianos because they are moved around to different music halls," says Mohr. "The harder finish handles transport much better. A typical nitrocellulose satin finish is far softer, and you end up with strap marks and scratches. The durability of polyester helps us out quite a bit on the concert stage."

"Building up a polyester finish, and then precisely polishing it to a high-gloss is an amazing amount of work, particularly on pianos," says F. Grottoli. "For example, Cavalieri worked in collaboration with Steinway & Sons on the "Rhapsody" piano, which has several hundred mother of pearl stars inlaid beneath the finish. The results were worth the efforts. It is a fascinating industry. 'Technology blended with Craftsmanship' is the Cavalieri model of business." **s&p**



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