Sometimes in the wine world, changes that seem new can also be very old, perhaps almost as old as dirt. The Romans, for instance, were using cement vessels to ferment wine 2,000 years ago. While the material is not for everyone, the technique of producing wine in cement is returning to a few of Napa Valley’s super-premium wineries. The tanks, which come in unusual shapes—including eggs, pyramids and squat ovals—raise the question of whether this is the future shape of the wine country. Will cement be the next new Napa nuance?

Charles Thomas, former winemaker at Rudd Vineyards & Winery in Oakville and now with Quintessa, may have helped to start this revisionist revolution back in 2003 when he imported cement tanks to ferment some of Rudd’s wines. Since then, Tim Mondavi, winemaker for the soon to be released Continuum; Charlie Wagner of Caymus and Conundrum wineries, and Alan Viader of Viader winery are also mixing concrete with some of their ultra high-end fruit. Others, too, are becoming serious about the process.

“The tanks we have are the 400 HL (about 1,000 gallons) oval tanks, and we’re using them exclusively for our white wine called Mer Soleil, Silver. It’s an un-oaked Chardonnay from the Santa Lucia Highlands, and it retails for $40,” Wagner said. “We started with six tanks and currently have 20 of them, and hope to get more in the future.”

Mondavi stated: “I’ve seen them in use at Petrus—some of the world’s most expensive wines; and I’ve seen trials, both here and in Bordeaux, involving oak casks, cement and stainless steel. The results have come up with oak, of course, first, but cement comes in a close second. Stainless is a distant third. While at Continuum, our emphasis is on oak. We also have two cement fermentors as part of our new winery.”

Viader said he, too, is using cement containers to ferment some of his reds. “We’re doing Petit Verdot, Syrah, Cabernet Franc and a little bit of Cab,” he said. “For us, we’re seeing that it really expresses the bright fruit characters of the wine. We’re getting nice, fresh, really expressive aromas which, for some reason, come out a lot more in cement.”

Patrick Sullivan, the present winemaker at Rudd, added: “While I’m still new to these tanks, I’m impressed with the results. In fact, we’re planning on phasing out some of our old stainless and increasing our cement tanks to about 40 percent of production. At this point, I just need to find the room.”

Jeff Cohn of JC Cellars in Oakland said he is eager to try his new cement tank on his Rhône-style white. “I actually just bought the one that was on display at the wine symposium in Sacramento, and they just delivered it,” he said. “I can’t wait to see how it affects my wine. From what I’ve sampled, I’m hoping for a richer wine with more minerality and lots of fruit.”

Re-entering the Market

The man behind the reinvention of cement, Thomas, said he first got the idea in the 1980s when he talked to a winemaker at the Woodbridge winery in Lodi. “They were still fermenting in cement tanks back then, and they were very loyal to them,” he said. “They didn’t seem to have any problems and, in fact, felt very good about them.” He began to notice them again on his trips to France. “If you go around the wine cellars of Burgundy, you’ll see that maybe half of the cellars that produce red Burgundy are using concrete tanks—and have been for generations. It’s the same in other parts of France. In the Pomerol and St Emillion, there are a lot of concrete tanks among the smaller estates. The co-ops look like San Quentin prison, and what look like cell blocks are actually wine tanks.”

Thomas said he decided to order them after tasting the wine. “You get richness without oak. I think the wine is more aromatically pure. They’re easy to take care of, so long as you don’t use a high-pressure sprayer or hot water beyond about 110 (degrees Farenheit),” he said.
No other wine closure in the world can claim all these advantages. Natural cork is the sustainable closure. With over 3 billion corks sold each year, AMORIM is the undisputed leader in natural cork closures worldwide.

AMORIM – your global partner in sustainability.

Amorim Cork America
Napa, California • 707-224-6000
www.amorimca.com
Mondavi said their two 1,000-gallon cement tanks also came from Burgundy. They were purchased two years ago for his family’s “new beginning” in winemaking. They were used in the fermentation of their germinal wine, the 2005 Continuum, which is scheduled for release on April 2. He is making the wine in a family partnership with his sister, Marcia, and his iconic father Robert and Robert’s wife Margrit.

He said the two tanks, “cubes,” were used along with eight oak casks to produce the family’s proprietary blend, a mix of Cabernet Sauvignon, Cabernet Franc and Petit Verdot. The fruit is primarily from the To-Kalon vineyard in Oakville and the Mondavi Stag’s Leap vineyard.

“We’ve invested in these tanks in part because they have excellent temperature retention,” Mondavi said. “The great thing about the cement is that it is so well insulated that you don’t have to use much energy to cool it down or heat it up. The cubes also give great extraction of flavor and color. Unlike stainless, which can produce an austere wine, cement, like wood, gives richer, more supple flavors. There is something in the material that retains more fruit flavors as well as complexity. It’s a great combination.”

Ease of handling is another important feature of cement, according to Mondavi. “They don’t require the same intense care necessary for managing oak, but they should be watched carefully to avoid any biological madness going on. Just brush with tartaric acid, keep them dry and aired and treat with sulfur as needed.”

He said the family partnership produced a total of 1,500 cases from the 2005 vintage. Its suggested price is $125 a bottle, and his daughter, Carissa, will be managing and marketing the brand.

According to Wagner of Conundrum, the inspiration behind his cement tanks “was to offer two different flavors from the same vineyard and come up on opposite ends of the spectrum,” he said. “Everything about the fruit is the same: the treatment of the vineyard, the pruning, irrigation, fertilizer. It’s the style that’s different, and the cement containers add to this distinction. This is our second vintage of the non-oak, non-stainless style, and we’re making it to complement our Malo-treated, oak-aged wine, the original Mer Soleil. I wouldn’t say the tanks add a flavor, but I would say they add to the texture, give it a twist.”

Wagner said they keep the Silver in cement about six months and then a month in stainless to get it cold, heat stable and bottle ready. “I named it Silver because of the cut of the word itself; it connotes a cool, crisp style. That’s what we want to come to mind.”

Their flagship Mer Soleil, on the other
hand, spends a whole year in French oak and receives 50 percent malolactic treatment.

Wagner said he first saw the tanks at Viader and, when he was on a trip to Burgundy, decided to visit the factory. “I ordered six,” he said. “That’s how it started for us—ordered them on a whim, hoping they would work for our new style Chardonnay—and they have. The guy at the plant said he would take care of everything. He shipped them to Oakland and set them up in Salinas. The tanks weigh about 8,500 pounds, so shipping really adds to the cost: They were $10,000 each. The shipping added another $6,000 apiece.”

According to Viader, they have three 900-gallon fermenting tanks (cubes) and one 150-gallon egg and are utilizing every one. “It’s something my mom read about and was very excited about. I got excited, too,” he said. “We’ve had them now for four years and plan to get a few more. They produce a soft, gentle fermentation, leaving the aromas intact. It’s easy to clean and a lot less care than wood. You don’t have to worry about them drying out. We store wine in them for six months. The egg we’re using for Petit Verdot. We’re blending it with wine from new French oak. That blend, together, is beautiful. The bright fruit from the egg and the flavors and complexity from the barrel play together very well. We’re having a lot of fun with it.”

He added that it handles the malolactic very well. “If anything, fermentations start a little bit earlier. I can only do a five-day cold soak while with stainless, I can go to 10. The porous nature of the concrete does keep some yeast in there but that doesn’t bother me. It’s not an issue.” He likes the cube shape because he said it creates a wider cap and better extraction. An added feature of the egg, which sits vertically, forces the cap to stay down in the wine. His one complaint about the egg: It needs a door to remove the pomace. “If it had a door, I’d use it as much as possible. Then you could do everything in it.”

Rudd Winery, in Oakville, still has the greatest variety of cement containers. According to Sullivan, it is using six tanks: four round and two pyramids as fermentors. It also has eight eggs, plus one horizontal, called the “hippo.” The winery’s stock ranges from 70 gallons to 2,000. “Maceration is easier with these because the temp stays even for longer periods and the flavors are a standout,” he said. His only concern is about the covers and the locking system on some of the small containers, where some of their whites are stored. “Excess aeration could be an issue, especially for the whites, so it’s important that the seals are tight.”
are checked and maintained, and locks are effective—but watch those SO2 levels, too,” Sullivan said. He said the eggs are holding Sauvignon Blanc; the hippo has Chardonnay; and the fermenting tanks are used for the Bordeaux varieties and Syrah.

Cohn, the newest kid on the block, is clearly enthusiastic about his new 150-gallon egg for its micro-aeration quality. He said he wants to temper the leaner, stainless style with the more supple flavors that he thinks cement will bring. “Cement has an ability to breathe, so I think it will produce a richer blend. At least that’s what I’ve tasted from other wines made in cement.”

His wine is a Rhône white called “First Date.” It’s made with 75 percent Roussanne and 25 percent Marsanne. “Up to now, I made it from a blend of 60 percent oak and 40 percent stainless steel. In cement I’m hoping for more fruit overtones and a brighter and more exotic wine. I’m hoping my First Date will become a second and third date for others.”

The majority of the tanks being used in the wine country are produced by the French firm ETS Nomblot SAS. Its factory is in Ecuisses, on the Route de Beaune in Burgundy. Marc Nomblot (pronounced Nomeblow) is the president of the family-run company, which has been making concrete wine tanks since 1922. He said it has produced over 15,000 tanks, ranging in size from a 70-gallon egg to containers that can hold 10,000 gallons and beyond. They come in assorted shapes, including rectangular, square (cube), elliptical (egg-shaped), trapezoidal (pyramid), truncated cone (upright cask) and round.

“Our vats are made of basic, high-quality cement plus washed gravel and sand and spring water, not chlorinated and with no other additives,” Nomblot said. All material is Burgundian. The small containers are made in sand molds in two pieces and then formed together with their own symbiotic stands. They are fitted with stainless steel caps and spouts. Most of his sales are for unlined tanks. “The tanks can be

quality. He said he wants to temper the leaner, stainless style with the more supple flavors that he thinks cement will bring. “Cement has an ability to breathe, so I think it will produce a richer blend. At least that’s what I’ve tasted from other wines made in cement.”

His wine is a Rhône white called “First Date.” It’s made with 75 percent Roussanne and 25 percent Marsanne. “Up to now, I made it from a blend of 60 percent oak and 40 percent stainless steel. In cement I’m hoping for more fruit overtones and a brighter and more exotic wine. I’m hoping my First Date will become a second and third date for others.”

The majority of the tanks being used in the wine country are produced by the French firm ETS Nomblot SAS. Its factory is in Ecuisses, on the Route de Beaune in Burgundy. Marc Nomblot (pronounced Nomeblow) is the president of the family-run company, which has been making concrete wine tanks since 1922. He said it has produced over 15,000 tanks, ranging in size from a 70-gallon egg to containers that can hold 10,000 gallons and beyond. They come in assorted shapes, including rectangular, square (cube), elliptical (egg-shaped), trapezoidal (pyramid), truncated cone (upright cask) and round.

“Our vats are made of basic, high-quality cement plus washed gravel and sand and spring water, not chlorinated and with no other additives,” Nomblot said. All material is Burgundian. The small containers are made in sand molds in two pieces and then formed together with their own symbiotic stands. They are fitted with stainless steel caps and spouts. Most of his sales are for unlined tanks. “The tanks can be

BRETTANOMYCES
Because of the porosity of unlined cement and thus, possible breeding sites for contamination, the issue of Brettanomyces (Brett) becomes apparent. Brett is a ubiquitous spoilage yeast that loves wineries. It could leave the compelling scent of fresh leather but, more likely than not, a mousy, barnyard stench. It is a problem that Napa wineries love to hate but mostly fear because, as they strive for richer wines with higher pH, lower SO2 and no filtration to gain 9-plus scores, the risk increases for the heartbreak of Brett.

Nomblot said Brett is not a problem in his tanks if properly handled. “In 25 years [representing his firm], nobody had Brett problems with our concrete tanks. I have never had the question,” he said. “Winemakers have been sur-
prised to see how easy the cleaning protocols are. The concept of a concrete tank, for most people, is that it is very rough and porous—so very difficult to clean. They expect to have to use extreme measures to clean the nooks and crannies that they think are inherent to concrete. Our concrete process is a special formulation. Just make sure to properly neutralize and sanitize the bare concrete interior tank walls as per the enclosed maintenance and preparation protocol," he explained.

Once a year, his company suggests checking the condition of the gaskets and brushing the inner wall of the vats with a 30 percent tartaric solution. He also recommends the use of pH basic products such as Vitinet 0011, PeroxyClean or Vinoguard. The tanks should be rinsed with water at 104 degrees Fahrenheit.

Viader, when asked about the Brett issue, said: "There's no Brett in our winery, and it's a non-issue with us. Cement is no different than working with wood. We scrub them with an oxy-type wash, then use a tartaric solution. I go through with a little sulfur. I don't need to, but I do. It helps to make me sleep better at night. Our tanks are outside in the fresh air, and we have no problems with mold or growth."

A similar position is taken by Sullivan. "For us, so far, so good," he said. "As to whether Brett is an inevitability in these tanks, I don't know the answer to that. Cement may provide more of a harbor for contamination and perhaps more so than stainless. But there's also more room for contamination in wood. So, I don't believe it's inevitable if you work to avoid it. The key, first of all, is to not have it [Brett] in your winery, and that's our practice. We use ozone, Peroxy-carb, soda ash and citric or tartaric. If you don't keep your tanks—any tanks—clean, you can wind up with VA or Brett. They don't care where they live."

Thomas added: "Brett to me is never a positive, anywhere. You have to keep your SO2 levels high enough for the pH balance of your wine and keep your residual sugar low—small amounts can make Brett very happy. Judicious racking is important. I've seen 50-year-old tanks in France holding up. It's the quality of the cement that's important, too."

**THE FUTURE**

How big the market is for these cement tanks, especially with an expanding Euro, is still uncertain. This new, modest demand, however, is already inspiring competition. **Steve Rosenblatt**, president of Sonoma Cast Stone in Petaluma, said he has a prototype for a 180-gallon, egg-shaped fermentor/storage vessel and will begin production in June. "I already have orders for 12 and hope to have them ready by this year's harvest," Rosenblatt said. He admitted he got the idea from his winemaker, **Don Van Staaveren**, who admired the non-oak wines fermented in cement and thought there was a market for American-built tanks.

"Right now, we're just in the engineering stage," Rosenblatt said. "We've got a scale model and are working to complete our first mold." The tanks will be made of high grade cement; and by using a bladder insert, the vat will be made as one piece. The stand will be made of steel and have pockets for a forklift. It will have built-in coils, and a thermostat with optional heating and cooling. True to American temperament, the outside walls of the tank can be decorated in a choice of 24 colors. His first mold will allow him to produce one tank every four days, about eight a month.

"Ultimately, we hope to be able to gear up for anything, including custom sizes," he said. Prices should start around $4,800.

Thomas, who hopes to try cement tanks at Quintessa, gave the last word. "They're great. The material is readily available and fairly reasonable, and the tanks can even be used for storage. The French put their equipment in them during the winter."