

Bon appétit, introducing someone that loves to eat clay!!



It was three years ago that I first had serious thoughts about acquiring a de-airing pugmill. At that time I did a big search on the Internet and concluded that a [Peter Puggler](#) pugmill would be just right for me. Then I got put off. We don't have a Peter Puggler agent in New Zealand, so there was a considerable challenge, risk, and cost associated with importing them, and I had neither the money nor the inclination to go there. I also seemed to be managing clay preparation by hand, as long as I worked with small quantities.

The search for a pugmill began again recently when it became clear that I really wasn't able to cope with the everyday reality of clay preparation. In fact, a look round my studio, into the darker recesses, showed an embarrassing build up of part used bags of clay, bins of clay scrap, and sad heaps of dry clay that had been put to one side, months or years ago, awaiting the glorious day when time and a miraculous transformation of my physique would allow me to return them to a usable condition.

I did the usual Internet search and marveled at the mouthwatering range of pugmills that are carried by various US and UK suppliers, and enjoyed reading comments about them on ceramics forums. I learned about the relative merits of de-airing verses non-de-airing, clay mixing verses pugging only, stainless steel verses alloy, and so on. It was educational and somewhat mind boggling. Some pugmills even came in a range of attractive colours! How wonderful to be able walk into a veritable Aladdin's cave of pugmills and to say, "I don't care about how it chops, mashes or Hoovers clay, I just want one in pale blue to go with my curtains!" I looked a bit further into the process of importing equipment into New Zealand, and I searched for New Zealand suppliers of pugmills.

After several evening's work I concluded that there are possibly 2 brands of pugmills available in New Zealand. Venco and Shimpo, of them only the Auckland supplier of Shimpo pugmills had basic information including photos and price on line, agents for Venco pugmills had to be contacted for further details to get any information at all.

Venco pugmills are made in Australia, and I did see a rather small de-airing version in use at a potter's studio about 10 years ago. The pugmill was almost brand new, the potter who owned it was pleased to have it, but it looked like a toy to me, and its externally mounted vacuum pump made a loud baaaaaaarrrrk sound, much like an airless spray gun.

I bought a very old and tired non-de-airing Venco pugmill several years ago, but have hardly used it. The poor thing was quite worn inside, due to someone previously ignoring the scream of worn out bearings and the auger making contact with the inside of the alloy barrel as it wobbled around. I got our local engineering workshop to replace the bearings, but found that the thing was quite tiring to operate as it required a hefty heave on a handle to persuade clay to travel from one end of it to the other, and the clay extruded from it was rough and shredded on the outside, and rather gappy and uneven on the inside of the pug. Any clay that passed through it needed considerable hand wedging to bring it into a usable condition. Taking the thing apart for cleaning was a bit of a clumsy operation also, and using it rarely seemed worth the effort.

I did see some impressive videos of large Venco pugmills at work on YouTube, and I know from reading ceramics forums that potters find them reliable and useful. Sadly, the only 2 examples I have seen have been small and not very encouraging. Probably the larger ones are much better.

I returned frequently to the web site of the Shimpo supplier, [Bot Pots](#) in Auckland. Bot Pots listed only 3 models of Shimpo pugmills, a stainless steel non-de-airing type, a de-airing version of the first one, and a larger mixing and de-airing pugmill. I did as much reading about Shimpo pugmills as I could, visiting other websites from around the globe for further information. I was fairly reassured as to quality, I was alarmed as to price, especially in New Zealand, and began to think of ways of raising the funds, including taking out a mortgage on our home.

I mentioned my pugmill thoughts to my father, and my parents very kindly offered to put up the money to make the purchase of a pugmill possible. I finally plucked up courage to ring up Bot Pots for further information about the 3 pugmills they had.

Richard, of Bot Pots, was good to talk to, and it helped a lot when I discovered that he was a potter who was in his early 60s, he enjoyed making large pots, and had a background in aeronautical engineering. I know that Richard was trying to sell me something, but his analogy of a potter having a pugmill being much the same as a builder having a digger, was a useful one. What builder these days would dig out the foundations of a house with a shovel!

Some Emails to and fro followed our talk, and Richard organized freight from one end of the country to the other and quoted a very reasonable price.

Sold!

A week later, I was writing the previous blog post to this one whilst awaiting the arrival of the pugmill. Any nightmares that I had about how this heavy piece of kit would be unloaded from a truck and maneuvered into my studio was taken care of by our local carrier, Arnie Tiddy. As he balanced close to 160kg onto his sack barrow, Arnie said that he had been delivering local freight for the last 47 years. Every bit of that experience was in evidence as he eased the pugmill up our ramp, with only an inch or two to spare between the railings at either side, and through the front doors, the gallery, past the etching press, and into my studio. It was a fantastic achievement, for which I am very thankful!

The "unboxing" should have been recorded and uploaded to You-tube, as seems fashionable these days, but only a couple of still photos were snapped before we snipped various straps and ties, unwound shrink wrap, decapitated the cardboard box, and persuaded the new Shimpo to step off its palette and onto the studio floor.



Shimpo NVA-4S De-Airing pugmill

An evening of fairly hilarious reading of the instruction manual followed *. Page one gave the key to various warning markers and levels of warning. From, **Danger** = "*possible death, severe injury or fire*", through, **Warning** = "*possibility of severe injury*", to **Caution** = "*possibility of minor injury or damage..., however, depending on the circumstances, it is still possible to cause severe injury*"! Also there were signs that included, "**Do Not**", and "**Please Follow Instructions**".

Operating the Shimpo looked as serious as planning a trip to Mars.

I made a point of reading and understanding the manual, as I have not owned or operated a de-airing pugmill before, and I tried it out the following day, after I had inwardly digested the mysteries of its intergalactic capabilities.



Clay scrap, chopped up and moistened with water.

After preparing a meal of clay scrap for the pugmill to eat, I switched on the vacuum, switched on the auger, closed the air valve, lifted the lid and fed in the first clay!



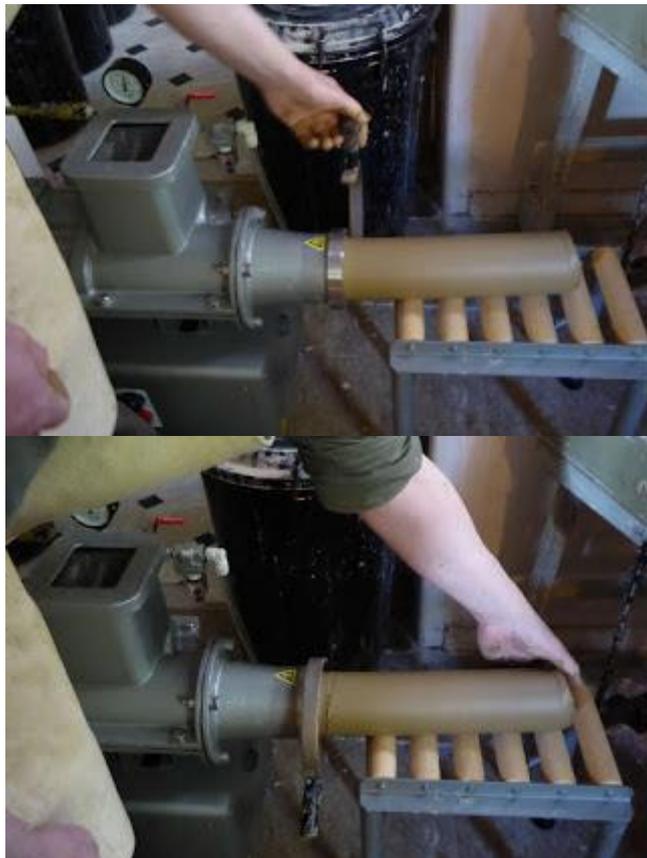
The sky did not fall in. The earth continued to rotate. The Beast did not latch onto my sleeve and lacerate my arm!



Ha, Ha... the pugmill is a delight to use. There is a steady rumble of motor and vacuum pump, but not unpleasantly so, and I can still listen to the radio and operate the machine at the same time. On first use I processed about 40kg of scrap clay in about 15 minutes (the pugmill is rated to do 200kg per hour). I immediately made a vase from the freshly pugged clay, which I found to be very even in texture, airless, and very good to throw.



Only a gentle pressure on the lever over the hopper is required to push the clay down to the augers, the pugmill takes care of the rest. Mechanically, things are quite interesting, as the design has two parallel inter-meshing augers that chop the clay up and draw it into the vacuum chamber. Air is removed from the clay, after which it is extruded through a nozzle. Shimpo supply a little table with wooden rollers, onto which the freshly extruded clay runs. A handy stainless steel cut off wire, chops the the clay into lengths.





In spite of all the dire safety warnings in the manual, the machine is very safe to use as the augers only turn after clay has been put in and the lid shut. When the lid is opened, the augers are stationary, which means the chances of hands being chopped up by whirling blades is minimal.



Yum, yum.... a stack of clay sausages!

I have used the pugmill 3 times now, and am making great inroads into sorting my scrap clay mountain. Yesterday I reconstituted two 20 kg bags of clay that had become very firm. I could just manage to chop it into thin pieces with a heavy wire. I dipped each piece in a bucket of water, then heaped them. After a few minutes they were soft enough to go through the pugmill. I put them through twice, and dipped both times. Now I have lovely clay of a throw-able consistency.

I am very thankful to Mum and Dad, to Richard of [Bot Pots](#), to Arnie Tiddy our local carrier, and to the designers and makers of [Shimpo pugmills](#)!

**My favorite use of the most severe Warning possible, "Danger = possible death, severe injury or fire" was on page 9 of the manual... "Danger, Please be careful to handle screw since the tip is sharp."*

Posted by [Peter](#)