

New Video – Scanning a Predynastic Ancient Egyptian Vase down to 1000th of an Inch!

Scanning a Predynastic Granite Vase to 1000th of an Inch - Changing the Game for Ancient Precision!



The debate around whether or not ancient technology existed and was responsible for creating the obvious precision found on many ancient artifacts has taken a strong step forward! Concrete, undeniable evidence for utterly astounding geometric precision has been discovered by professional metrologists Alex Dunn and Nick Sierra, based on the structured-light scan results from a predynastic rose-granite vase, an artifact from Ancient Egypt that is at least 5,000 years old. The implications from this evidence on the story of our own history of civilization are profound.

This is exactly the type of work I've been calling for, for years now – the application of our own advanced levels of science and technology to the open-minded investigation of our past. Join me as we explore this remarkable new work, and what it might mean. Many thanks to Alex, Nick and Adam for their time and efforts in getting this work done, and I will be releasing my full discussion with them as a video on this channel.

Below are the reports for the scan – in both Imperial and Metric.

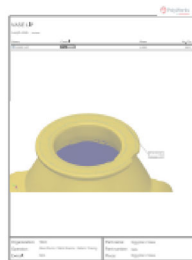
Vase

1 / 8

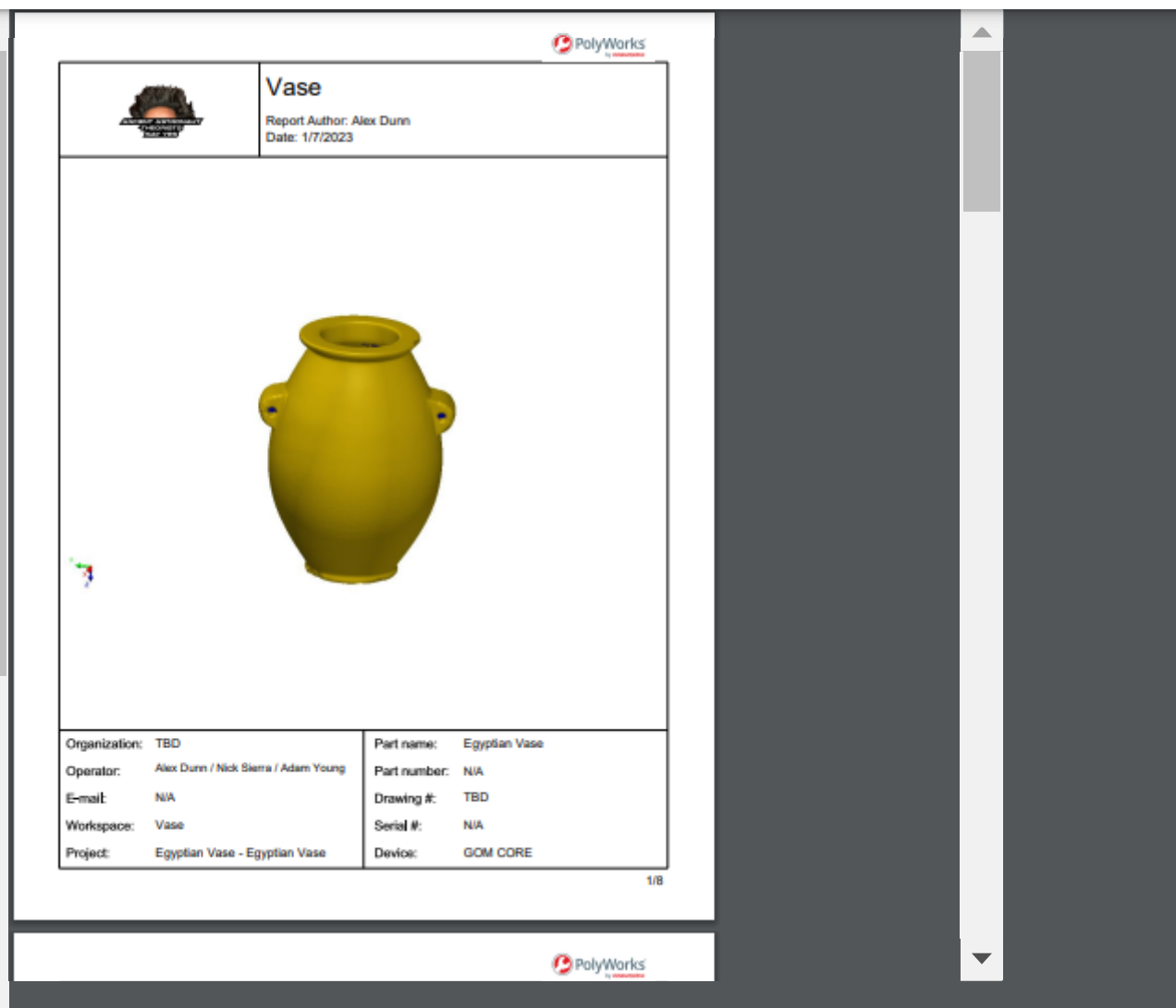
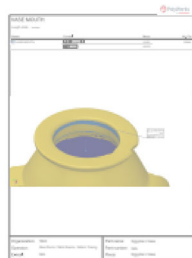
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1



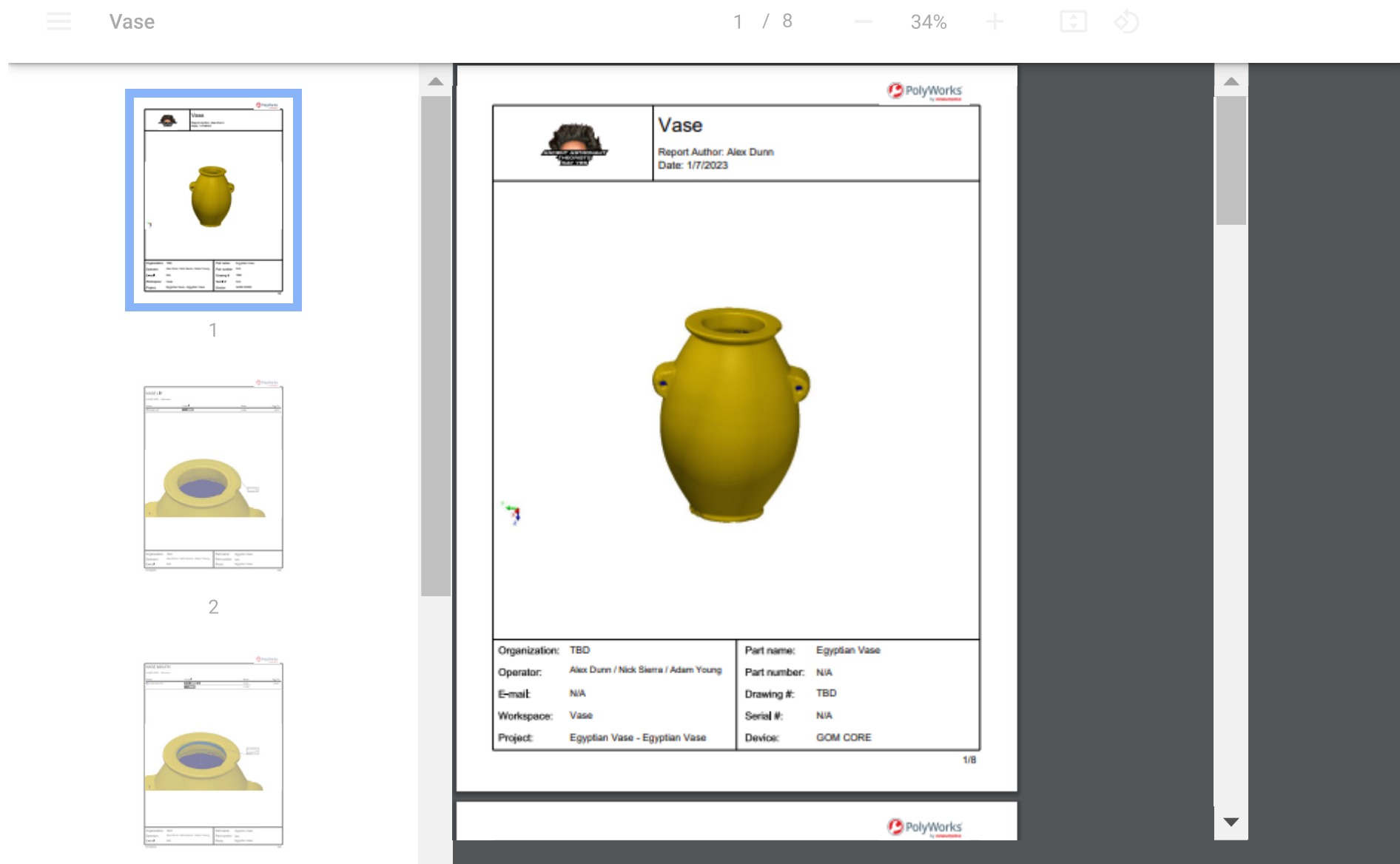
2



Organization:	TBD	Part name:	Egyptian Vase
Operator:	Alex Dunn / Nick Sierra / Adam Young	Part number:	N/A
E-mail:	N/A	Drawing #:	TBD
Workspace:	Vase	Serial #:	N/A
Project:	Egyptian Vase - Egyptian Vase	Device:	GOM CORE

1/8

[VASE-REPORT-INCHES](#)[DOWNLOAD](#)


[VASE-REPORT-METRIC](#)
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B V / January 28, 2023 / Video / Uncategorized

22 thoughts on “New Video – Scanning a Predynastic Ancient Egyptian Vase down to 1000th of an Inch!”



Ahmet Ural

January 28, 2023 at 10:08 pm

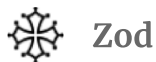
Hi Ben, i've been following you over a year. One of your youtube video was about the huge granit boxes underground. Yousef and you clearly show that one of the box lid has liquid drip marks on the edges. I dont know if you accept or not that, i believe they used same liquid to shape or polish these vases. Because, in any way rotating and try to shape these stones with anykind of hard material would make harm or leave scratches on the surface. After giving rough shape to the stone, using that type of liquid or whatever is that chemical gives surface much more precision and smooth look on

rotating, in any speed. I think there is same work for other things, like shiny statues, boxes, vases or some little objects that are hard to do hand work or any metal based work on them. I hope it makes sense. Sincerely.



January 29, 2023 at 6:13 am

Yes I have a whole video dedicated to the evidence for liquid polishing.



January 28, 2023 at 10:42 pm

I notice you used a cross-sectional diagram of The Great Pyramid on your video.

I have a more explanatory diagram here: <https://ibb.co/88GNg8J>

It is of course over 12,000 years old...

Further explanation is here: <https://www.scribd.com/document/607698815/Floating-Coffer-Theory-2nd-Draft-221114>



January 28, 2023 at 11:55 pm

Great new video, the first time I've heard anyone address the lug issue. As someone that has turn objects this was always a point of interest. In some of the closing footage you can see what look to be an unfinished example of a vase that was yet to internal machined to make it a vessel. Another interesting consideration to all this is how, whatever this technology was, it was scalable. It could be utilised on small objects like vases but then it could seemingly be scaled up to be used to produce massive statues or even to machine massive caves. To keep the precision the object would have to stay on the one machine through the different machine processes or a have a chuck that could stay fixed to the piece when it when form one machine to another. Working in a material with different densities like an aggregate which is quite denser or harder would be challenging I would expect as the tool might catch and slip during the process. Just some thoughts that jump to mind when considering all this. Great work.



John Bryant

January 29, 2023 at 2:36 am

Where might we find the STL files used in this report? The more eyes on this data the better!



BV

January 29, 2023 at 6:14 am

It's coming, I'll post it and notify via social media etc when it's available.



James L. Patterson

January 29, 2023 at 4:58 am

Ben,

Came across this recently. A sculptor who has attempted to recreate Egyptian hard stone vessels by hand. May be worth investigating as a response to your granite vase YouTube video (<https://www.youtube.com/watch?v=WAYQQRNoQaE>) although I would personally consider her attempts as a major fail. Look up sculptor Olga Vdoniva and/or her assistant Julia Gukasova.

A few links I was able to find:

https://antropogenez.ru/diorite_vessel/

https://vk.com/wall-193717914_30041?lang=en

https://vk.com/wall-118415161_4448?lang=en

Most importantly:

https://t.me/wind_history/15183?single (translation follows entry)

Entry:

Скульптор Ольга Вдовина и её ассистентка Юлия Гукасова не смогли повторить вазу из диорита по древней, как они считали, технологии, а именно при помощи каменных инструментов, кости и песка.

За эталон была взята хорошо отполированная ваза из порфирового диорита, выставленная на аукционе Сотбис. По официальной версии это египетская ваза додинастического периода, культуры Нагада II/III, датированная около 3600–3000 до н.э. (первое фото).

На изготовление маленькой диоритовой вазочки 15 см высотой вручную ушло два года и результат далёк от оригинала. А также авторы отказались от полировки.

Кроме того, египетские вазы имеют достаточно тонкие стенки и внутренний объём повторяет внешние формы таких ваз, а исходя из слов реконструкторов, у той вазы, которую они изготовили, внутренний объём уходит под конус.

Реконструктор Ольга Вдовина признала, что отшлифовать диорит по той технологии, которую возможно, как они предполагали, применяли древние египтяне (мокрый песок), практически невозможно.

ВЕТРЫ ИСТОРИИ

Translation:

Sculptor Olga Vdovina and her assistant Yulia Gukasova were unable to replicate the diorite vase according to what they believed to be ancient technology, namely with stone tools, bone and sand.

A well-polished vase made of porphyry diorite, exhibited at Sotheby's, was taken as a standard. According to the official version, this is an Egyptian vase from the pre-dynastic period, Nagada II/III culture, dated around 3600-3000 BC. (first photo).

It took two years to make a small 15 cm high diorite vase by hand and the result is far from the original. And also the authors refused polishing.

In addition, Egyptian vases have rather thin walls and the internal volume repeats the external forms of such vases, and based on the words of the reenactors, the internal volume of the vase they made has a cone.

The reenactor Olga Vdovina admitted that it was almost impossible to grind diorite using the technology that they supposed was used by the ancient Egyptians (wet sand).

WINDS OF HISTORY



January 29, 2023 at 6:16 am

I'm aware of this. Great effort, sure, experiments are a good thing. You can't remotely claim that it matches the features, aspects, precision and symmetry of ancient examples, particularly now that we have real data. Can you shape stone with primitive methods? Sure. Can you make precision artifacts that way? No one has demonstrated that you can. Something else was going on.



January 29, 2023 at 6:35 am

Hi Ben

I've been watching your unchartedx on YouTube for a while now, and love the subject of ancient, advanced engineering. I would like to offer my thoughts....

Firstly, my background; 63 Years old. Fitter, Turner, Toolmaker by Trade. 30 years in manufacturing in (mech.) Product testing and QA systems. More than half of my working life as QA Manager in Tier 1 & 2 Automotive parts manufacture and (global) Healthcare devices. CNC production, Moulding of parts, and CMM touch probe measuring, as well as Non-

contact measuring of hi-tech parts. Set-up & managed SPC (Statistical Process Control). (I'm still 'today', designing and making unique parts in my workshop (Auckland / NZ).

In regard to the video on the scanning of the Vase, with the Polyworks software. This Vase is absolutely (100%) been made by advanced machine tools (Lathes / 5 Axis Machines etc., and has to be from some sort of CNC – 3D model, or equivalent). (and most likely a 2D drawing for the metrology). I believe this Vase was firstly machined 'bang on' accurate, and the small (measurement errors) discrepancies seen in the Polyworks result sheets, were from polishing post machining.

To dismiss (100%) any nonsense from certain quarters, that it's possible to make such a Vase using hand tools; think for just 1 minute, that to make any accurate piece of work (say in the order of ± 0.010 ”, or less) to a drawing, 'you' need to have advanced measuring tools, and if you had that, then 'you' would already have the (very) capable machine tools. Obviously, the measuring tools would have an appropriate resolution level, so the workpiece can be checked regularly throughout the material removal process. I haven't seen this particular sub-topic on (any) possible ancient measuring tools, and what they could have looked like?

I just thought it could be valuable to discuss what measuring tools could have been used, and also where there's two or more of the same artifact, it would be good to see what measurement variation exists. i.e. did they have serial production, within close tolerance output from piece to piece?

Best regards

Richard Belgrave

29/1/23

PS: Keep up the great work!

**Vince Nelson**

February 15, 2023 at 1:08 pm

Just like you can draw good circles with a low tolerance compass I'm not sure if you need to actually unit measure the object that precise. That question would maybe come up if you find exactly identical jars, or if the dimensions had to match something very specific. Check yt what M. Imran from Pakistan handicrafts does with just a crude caliper and tape measure.

To me the crucial trick lost to written and physical record is how they got the low hub tolerances to turn something like this. Or maybe we are overlooking something in plain sight, eg. the object itself being part of the mechanism.

Though simple, any kind of cranking mechanism to efficiently make a rocking partial rotary motion shows up way way later in written record, without that making the handles would take ages. Then again, that may explain why they stopped doing it and went with pottery instead.

**Milton de Silva**

February 21, 2023 at 5:57 pm

Hi Richard ,

Great to see another like minded kiwi in Auckland.Builder by trade and plan to do the trip with to the pyramids in 2024.cheers Milton de Silva



January 29, 2023 at 10:45 am

One of the more important of your excellent videos for some time. We certainly need more of this quantitative work to happen. Sharing the data is exactly what's needed and I look forward to that, thank you. I am one of those who would be keen to try modern methods to replicate the geometry, be that via CNC machining or various additive techniques. I have 20+ years in metrology and manufacturing engineering.

A couple of points I would add. No mention in the video about scanning the interior, this would be quite difficult with a GOM scanner as used – this is also something that will give significant clues into the manufacturing method.

Thickness, and uniformity of walls would be very useful to measure. Also, measuring deviation from nominal form as a function of position can be a real indicator of fixturing stiffness. If this is seen in the data, we could start to build a picture of how it was held and reverse engineer the tooling method slightly further.

My last point would be about tooling marks and whether or not the point cloud is of high enough resolution to include these, if they are even present on the vase at all.



February 2, 2023 at 11:42 am

My thoughts regarding the trueness/accuracy of the vase.

Is it possible that some or all of the discrepancy could be caused by the release of stresses in the stone when it has been worked or induced when it was stored.

Also if these items were easy to make at the time would it not be plausible that pairs may have been made. If so

comparing them may give an insight into repeatability of manufacture and therefore possible type of machine and tooling.

Regards

Jon Stanswood



art guerrilla

February 3, 2023 at 3:16 am

1. THANKS for videos on these topics, never paid much attention until stumbling upon your (and other) videos on the subject. VERY thought provoking, and appreciate you don't go off the deep end with unnecessary speculations which distract from what are real and significant mysteries.

2. In presenting and comparing the various measurements of smoothness, eccentricity, etc, I think it would be very helpful to many of us if **more** comparisons were made to everyday objects we would be familiar with.

For example, it was either this or another of your videos where it made a comparison of the 'smoothness' of a polished granite tunnel wall versus modern float glass. That comparison was great; it draws a picture in our mind's eye, and gives us a 'feel' for what the unfamiliar numbers and units indicate.

Along those lines, do a typical roundness/eccentricity, 'roughness', etc measurements of common items people would think of as being 'very smooth', 'very round', 'very symmetrical', etc; and how that compares to the 'egyptian' artifacts. Say, eggs, billiard or bowling balls. A typical drinking glass. Fine ceramic plates. You get the idea.

Further, contrast the laser-straightness of 'egyptian' tunnels, etc with modern tunnels **we** build which are **supposed** to be 'laser straight' (built using lasers!), but probably end up plus/minus a couple inches in surface measurements.

Think those comparisons would help people get a feel for how amazing their accomplishments were in making these

stone artifacts.

I have a little experience turning 'stone' (alabaster) back in the day when I did a lot of woodturning. First thing, it was a mucking fess, a talc like powder covered EVERYTHING electrostatically (and I'm in la Florida with high humidity!); lucky I had a full face shield and powered respirator. I probably didn't have the best quality alabaster, but it had random quartz nugget inclusions about 1/16" to 1/4", and they would get plucked out when turning, leaving a new void that you would now have to turn the surface down further to get rid of that! Fun. Lastly, it would dull HSS chisels in less than a minute, then you were just rubbing away alabaster. Eventually simply used pieces of really rough sandpaper to form the small bowls I made, then progressed through the grits up to about 1200, plus 4-0 steel wool to get a mirror shine.

Keep up the fine work.

artguerrilla@windstream.net



John D Finley

February 10, 2023 at 2:56 am

I have heard that mercury is found at many ancient sites. Mercury has a specific density greater than that of granite. Meaning granite would float on mercury. Any chance the ancients used this to move massive granite blocks down tight hallways? Would need a way to evacuate the mercury after the blocks were in place. Any evidence of drainage routes? Exposure to mercury is lethal. Do any gravesites show evidence of mercury poisoning? Just curious.



Brian Gallagher

February 13, 2023 at 5:10 am

Would a basic lathe and corundum or diamond cutting tool might be able to create the inside and outside profile of the vase to any desired thickness (in principle, not sure how it would be affected by inclusions)?

The challenging part of this design is the lug handles, and this is the part where the measurements would be most useful.

The jug could have been cut with the lugs as a constant shape around the full width of the jar, and then afterwards could have been ground down by other means everywhere except where the two remaining lug handles are.

These ground-down portions and the surfaces between the lug handles are where the measurements of tolerances would be most telling, but these are not measured in the provided reports. I would like to see that variances in tolerances in the surfaces on the plane of the lug handles from the top of the lug to the bottom of the lug. Additionally, the variances in the placement of the drill holes in the lug handles is also not provided, but would be insightful as they would also require a third step in the manufacturing process.

Can the report be expanded to include this data?



February 13, 2023 at 6:21 am

The full STL file will be released with the new video, coming soon.



Brian Gallagher

February 13, 2023 at 5:12 am

Re: my above comment, this is the area that would be great to have tolerances on:

<https://monosnap.com/file/EfOtqQLdsHWFeloVOLZVXPMIAPxJdz>



art guerrilla

February 14, 2023 at 1:49 am

excellent point, BG, the lugs would definitely be a problematic area to machine...

as a (mostly lapsed) wood turner, i look at the stone objects and conjecture just **how** i would 'turn them', **GIVEN** a lathe with enough RPM/torque, and tool tips of **whatever** type that would 'cut' -especially- the harder stone, just **how** would i accomplish a given profile, a given interior, a given thickness, etc...

another conjecture could be that **IF** there is some stone softening type of technology / solutions, and/or some sort of ultra-sonic (whatever) tech that could essentially form and 'glue' stone together, **then** a jar could be turned with the whole profile (**OR** formed in a mold, **OR** formed as on a potters wheel ??), and separately made lug pieces 'glued' (seamlessly?) onto the jar, etc...

total speculation, of course, but the 'stone softening' ideas do have some appeal to me... **still** does not really address **manipulating** HUGE blocks, statues, obelisks, etc, but **could** explain a lot of incredible 'machining'...



Patrick Visentin

February 14, 2023 at 2:01 am

Hi Ben,

You might consider CT scanning in addition to performing scans of artifacts of using a white light scanner and then 3D

printing the results. see <https://jgarantmc.com> I was at an Ars Mathematica 3D print conference in Paris in ~2007 One of the presenters (I think from Cloud State U in Minneapolis Minnesota) a paleobotanist was using a CT scanner to scan paleo aged seed pods that he was borrowing from a collection at the Smithsonian. It was cheaper than paying for the insurance for the real thing to be shipped back and forth and the Smithsonian have established limits (sic) on the number of times you can check out certain specimens. He had a baseball-sized seed pod, I think around 170 million years old or so that he scanned at the micron level and 3D printed the result using a Z-Corp 3D powder printer. Multiple prints of the seed were made at different scales. Then he cut one of the prints in half... His grad advisor literally fell off his chair as the CT Scan had captured a perfect rendition of the entire outer AND inner contents of the seed. They had never seen it in the “flesh” so to speak and It fundamentally changed the way they conducted research in his lab from that day on. Perhaps a CT scan print might reveal additional evidence on some of these artifacts i.e. inner structural changes in of the rock etc. that are not apparent from the topological scans?

I might be able to dig up his info if you want or you could contact Christian Lavigne at Ars Mathematica and ask him. christianlavigne@free.fr

Good luck and keep going.
Warmest Regards Patrick



SIMON BAILEY

February 21, 2023 at 8:10 am

Its lathed and the lug handles are fused on. Melting temperature of granite is only 600-700c.. A blacksmiths forge is over 2000c.

Studying the STL file I can clearly see the flat sanding block marks and the bumpiness along the creases surrounding the lug handles.

The holes in the lug handles are oval shaped as it there was stretch when lifted hot. Then the lug handle holes were re-drilled which you can clearly see.

Also the handles were not placed on square. They are cockeyed, as if placed on in a hurry.

The stone colouring looks different in the surrounding weld area, kind of a mushy blended look.

Scoop marks on the large granite blocks could also have been melted out. Most molten metals melt from 900c upwards many around 1000c. The scoop marks are easily explained if it was poured out to cool for any unused at the end of the day.

**BV** 

February 23, 2023 at 8:46 am

I dont think the handles were ‘fused’ on

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