CONSERVATION TALK
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Questions from the Field: More Cleaning, Setting
Compound, Preservation Assessments and Films from
the National Center for Preservation Technology and
Training (NCPTT)

Rotary Brushes for Cleaning Stone?

I’m still getting questions on cleaning. One that I
include in this month’s column deals with rotary
scrubbers. An AGS member wrote asking me about a firm
that is advertising using “only plastic bristle brushes.” Yet
the “brushes” are actually Nyalox rotary brushes used on
electric drills. They claim such brushes are safe and the
member wanted a second opinion. Another individual
wrote about a local company that uses “a fine diamond
studded pad” to clean stones and wanted to know if this
pad was safe. Another asked about using the various 3M
sanding sponges.

This answer is simple. No, none of these products is
safe to use and no, none should ever be used on historic
stone. Cleaning a stone is not the same as removing the
surface of the stone. Unfortunately there are always
contractors with no training in conservation who talk a
good game. They like abrasive products because they are
cheap, require no training, are easy for unskilled labor to
use and maximize their profits. To avoid such companies,
ensure that you hire a trained, professional conservator.
Local stone companies are not conservators and do not
have the training or knowledge to do this kind of work.

Back to those Nyalox rotary brushes. What is the rpm
(revolutions per minute) of a typical electric drill? Most are
variable speed, so from 0 to 3,000 rpm. What is the rpm of
the human arm and hand? I timed a couple of people and
it was around 60 rpm. Sure, you can go that slow with a
drill, but will most people be satisfied? I’m betting not.

More importantly, take a look at the manufacturer’s
web site for Dico Nyalox. It turns out that this is a nylon
with abrasive grit impregnated throughout each bristle. It
is a nylon pad with resins holding some grade of silicon
carbide mineral—an abrasive. What does the
manufacturer recommend to be done with these brushes?
Well, things like sand wood, remove paint, and round
edges. Using these brushes is just like sand blasting your
stone.

This harsh approach has significant potential to
damage stones, especially those that are friable, sugaring,
flaking, spalling, or have other problems. All abrasive
techniques, including high pressure water and sandblasting
are to be avoided. Contractors recommending them should
be similarly avoided.

Use of Pressure Washers

Another question I received had to do with my
recommendation to never use a pressure over 90 psi to
clean stone. The individual asked whether a pressure
washer could be used as long as the pressure remained
below 90 psi.

My advice was based on typical municipal water
supply pressures of between 50 and 100 psi. Obviously,
a sugaring marble or spalling sandstone will be
damaged even at 90 psi. In contrast, a new polished
granite can easily withstand 90 psi. Yet, even the least
expensive pressure washers for sale at big box stores
typically advertise pressures of 1500 psi and commercial
models can attain pressures of 7000 psi. I can’t image
anyone with a pressure washer having sufficient
restraint to not operate it at full force. Also, if you can
clean with simple water pressure, why spend the money,
time, and effort to lug around a pressure washer?

Like abrasive pads, pressure washers speed the
process and maximize the profits. They abrade the
surface of the stone. Quick, simple, easy . . . and
disastrous.