



# GMA ToughBlast™ saves 23 days or 60% time savings in Dayton Water Tanks Maintenance Project



## Job Overview

<b>Project</b>	Blasting of two water tanks
<b>Location</b>	Dayton, Ohio
<b>Task</b>	Blast trial on two tanks during maintenance. Challenge: Higher consumption, Lower productivity, achieved when using coal slag abrasive on Tank One.
<b>Surface Area (total)</b>	6,782 m <sup>2</sup> (73,000 ft <sup>2</sup> )
<b>Coating thickness</b>	5-30mm

A significant maintenance project involving two large multi-leg elevated water tanks, each with a capacity of two million gallons. The local painting contractor awarded the project used two different types of abrasive blasting products for each tank. Upon completion, the contractor found that one abrasive outperformed the other, resulting in a 7.7% total project cost saving.

### Specifications

The tanks are supported by a central riser column and 12 peripheral legs. These structures are completely enclosed with tarps that can be adjusted for wind conditions. Access is provided via swing stages and catwalk platforms suspended between the columns. The tanks, which are 15 years old, have a total surface area of 6,782 m<sup>2</sup> (73,000 ft<sup>2</sup>) with a coating thickness of 25 to 30 mm. The internal surface area is 2,601 m<sup>2</sup> (28,000 ft<sup>2</sup>), while the external surface area is 4,181 m<sup>2</sup> (45,000 ft<sup>2</sup>).

### Abrasive Blasting Process

#### TANK 1: COAL SLAG ABRASIVE

The first tank was blasted using coal slag. The performance and cost-effectiveness of this abrasive were recorded for comparison.

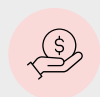
#### TANK 2: GMA TOUGHBLAST™

The second tank, which had a thicker coating than the first, was blasted using GMA ToughBlast™ garnet, recommended by BlastOne International, a GMA distributor partner. Two high-production MegaBlasters, each equipped with a 1,600-cfm compressor, were utilized for the task.

## Using GMA ToughBlast™



**PRODUCTIVITY**  
37.7% or 72.5 ft<sup>2</sup> per hour more efficient



**TOTAL PROJECT COSTS**  
\$26,576 or 7.7% savings



**CONSUMPTION**  
42% or 160 tonnes less abrasive



**LABOR**  
378 hours less labor  
22.9 days savings

## Why is GMA Garnet™ the preferred blasting abrasive?

Achieve safe, effective blasting with minimized consumption and unmatched coating adhesion.



### Surface quality

GMA: The proven choice for exceptional coating adhesion and reduced embedment, outperforming copper slag with embedment contamination levels of nearly 4.5 times higher.



### High productivity

GMA maximizes productivity and can significantly reduce the cost of surface preparation jobs.



### Reduced consumption

Lower your abrasive consumption by 30-50%, giving you savings in abrasive purchase costs, as well as transport, storage and disposal costs.



### Workers safety

By using GMA Garnet it can significantly reduce the presence of heavy metals and silica which are mainly found in other slag and garnet abrasives, cutting ground and air toxins, protect both workers and the natural environment.



### Low dust blasting

Independent tests show GMA Garnet™ cuts dust by up to 80%, boosting visibility and lowering contamination.



### Sustainable resource

Our garnet recovery programs present a cost-effective and environmentally responsible solution for used garnet disposal, with GMA garnet capable of being reprocessed up to five times.

## Results and Comparison

The foreman reported outstanding visibility during the blasting session with GMA ToughBlast™, a significant improvement over the coal slag used on the first tank. The enhanced visibility reduced downtime, as there was no need to wait for dust to settle, making the workday more efficient.

	Coal Slag	GMA ToughBlast™
Abrasive Consumption	380 tonnes	220 tonnes
Total man-hours	1,728 hrs	1,350 hrs
Nozzles used	6 - 7 for 12 hours per day	5 - 6 for 10 hours per day
Downtime		Minimal. Reloading once per day compared to 2-3x previously

## Key Project Outcomes

- **Overall time savings:** 60% time saving, reduced from 43 days to 27 days.
- **Cost Savings:** The use of GMA ToughBlast™ garnet resulted in a 7.7% reduction in total project costs.
- **Performance:** The GMA ToughBlast™ provided superior performance, particularly noted in the blasting of the thicker coatings on the second tank.
- **Efficiency:** Improved visibility and reduced dust levels led to a shorter workday and higher overall productivity.

The project foreman expressed his satisfaction with the performance of GMA ToughBlast™:

“My working day is shorter as I don’t have to stop and wait for the dust to settle to see what we are doing. The visibility during the blasting session with GMA ToughBlast™ was excellent, significantly improving our efficiency.”

## Summary

This case study highlights the advantages of using GMA ToughBlast™ garnet over traditional coal slag in large-scale maintenance projects. The superior performance, combined with significant cost savings and improved working conditions, demonstrates why GMA ToughBlast™ is a preferred choice for abrasive blasting in industrial maintenance.

**Disclaimer:** GMA applies a uniform methodology to compare costs across various variables. However, discrepancies in costs may occur. It is crucial to consult with GMA and alternative suppliers to confirm the final associated costs and pricing before finalizing your choice of blast abrasive.

The information presented is intended for comparison purposes only and may not accurately reflect the specific prices and costs associated with your blasting project. GMA disclaims any liability for differences between these estimates and actual costs incurred.

Please be aware that the estimates provided are based on blasting bare steel sheets and are meant for general informational use. The calculated figure does not represent a formal offer, and any declarations made herein should not be considered definitive or legally binding. GMA is not accountable for any errors that may arise from rate changes or offers not reflected in this tool's results post-use.

We strongly recommend verifying the most current offers and prices with your chosen suppliers.