

CASE STUDY

Effective Bitumen Coating Removal Using RapidBlast™ Equipment

Application

Bituminous coatings are widely used to provide a strong, waterproof, durable and economical protective layer for pipes, tanks and in old buildings. In addition, sometimes during the application process, the coating overspray on adjoining surface also needs to be removed (for example bitumen on pavements while laying it on roads). However, removing these coatings has been a challenge as traditional removal methods are either ineffective, labour-intensive, or pose environmental and safety risks.

The Challenge

Recently, we were contacted by a concerned farmer who had inherited a rural property that had been in his family for generations. Among the various structures on the land, he came across an old concrete rainwater tank that had long been out of use. Upon inspection, he discovered that the interior of the tank had been coated with bitumen, a common practice several decades ago to waterproof concrete and prevent leakage.

However, with increased awareness around the health and environmental implications of certain materials, he grew concerned about the presence of bitumen—particularly its association with polycyclic aromatic hydrocarbons (PAHs). PAHs are a group of potentially harmful chemical compounds that can leach into water over time, especially when bitumen coatings begin to degrade due to age and weather exposure.

The Solution

Dustless Blasting with RapidBlast™ Equipment, utilising wet abrasive blasting technology, presents one of the most effective and environmentally responsible solutions for removing aged bitumen coatings – particularly from sensitive surfaces like concrete water tanks.

Unlike traditional dry blasting methods that generate significant amounts of airborne dust and pose potential health and environmental hazards, the wet abrasive blasting process involves the controlled mixing of water with abrasive media. This unique combination allows for the simultaneous cutting and cleaning action of the abrasive, while the water acts as a suppressant to eliminate dust clouds during operation.



Advantages of Wet Abrasive Blasting

- **Effective Removal** – Wet abrasive blasting efficiently removes bitumen coatings from pipes, tanks, brick, stone, glass, and metal surfaces without excessive effort or time.
- **Surface Protection** – Unlike high-pressure washers, wet blasting prevents substrate damage while ensuring thorough cleaning.
- **Reduced Dust and Contaminants** – The water component in wet blasting minimizes airborne dust and hazardous particles, making it a safer option for operators and nearby environments.
- **Eco-Friendly Alternative** – Unlike chemical methods, there are no harmful chemical runoffs, making it a more sustainable approach.
- **Versatile Abrasive Media Options** – Garnet and Fine crushed glass are effective media for bitumen removal. Garnet provides precise cleaning without excessive wear on surfaces, while fine crushed glass offers a cost-effective approach for these substrates.



Case Study Application

A recent project involving the removal of aged bitumen coatings from water storage tanks demonstrated the efficiency of RapidBlast™ equipment. Operators utilised garnet as the abrasive media, achieving complete removal without damaging the underlying concrete surface. The process was conducted within a controlled environment, ensuring minimal waste and environmental impact. The result was a clean, smooth surface, ready for recoating or further treatment.

Conclusion

For industries requiring the removal of bituminous coatings, wet abrasive blasting with RapidBlast™ equipment is the most suitable and effective solution. By offering superior cleaning power, reduced environmental impact, and enhanced safety, this method outperforms traditional alternatives, making it the preferred choice for professionals in the field.

For more information on how Quantum Blast Australia's RapidBlast™ equipment can assist with your bitumen removal requirements, Contact our team today.