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

Bitumen does not dissolve easily and requires mechanical methods for removal. Alternative methods such as chemical applications, pressure washing, or open-flame heating present significant limitations:

- Chemical removal: Slow, inefficient, and generates harmful runoff that poses environmental hazards.
- Low-pressure washers: Ineffective against hardened bitumen.
- High-pressure washers: Risk damaging the substrate.
- Open-flame heating: Potential safety risks, including the release of harmful vapors and potential damage to underlying materials.

Given these challenges, a highly efficient, controlled, and eco-friendly solution is required.

The Solution

Wet Abrasive Blasting with RapidBlast Equipment Wet abrasive blasting, utilizing RapidBlast technology, offers an optimal solution for bitumen removal. This method involves combining water with abrasive media to provide controlled, efficient, and dust-suppressed cleaning.

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 – Fine crushed glass and soda bicarbonate are effective media for bitumen removal. Fine crushed glass provides precise cleaning without excessive wear on surfaces, while soda bicarbonate offers a gentler approach for delicate substrates.

Case Study Application

A recent project involving the removal of aged bitumen coatings from storage tanks demonstrated the efficiency of RapidBlast equipment. Operators utilized fine crushed glass as the abrasive media, achieving complete removal without damaging the underlying steel 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.