


INDUSTRIAL SOLUTIONS USA

A Best Practices Solution

Sound Attenuation

Best Practice Overview:	 <p>Application of thick sprayed on monolithic linings to processing/ material handling components to reduce noise generation.</p>
Applications:	Vibratory feeders, exhaust fans, chutes, hoppers, drop zones.
Target Markets:	Foundries, factories, aggregate, cement, ore processing plants
Lining Formulation:	Polyurethane/polyurea 100% solids castable
Lining Application System:	Hi-Flow, low temperature, low pressure plural component

Current Situation:

Foundries, factories and processing plants transport/process materials on bare steel. The running of the processing equipment combined with the materials impacting the bare steel creates significant decibels in the work environment. The noise created in this environment limits the production hours per worker. In addition, the wear from the parts on bare steel create a significant cost of replacement steel and downtime for installation/repair.

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Existing Problems:

The material transport/processing systems used in material handling generate high decibel levels in the workplace; workers were suffering as was production efficiencies. The constant impact and abrasion also cause wear and consequently expensive repair costs. The industry needs a cost effective way to provide sound attenuation in the work environment; increase employee production hours; decrease wear and reduce maintenance repair cycles.



The ISUSA Solution:

Spray thick linings onto the surfaces of the vibratory feeders, exhaust fans, chutes, hoppers, drop zones, etc. No modification of the objects to be lined is required other than industry accepted surface preparation. The surfaces of the steel to be lined were cleaned and blast profiled then cleaned again. After the substrate prep the surfaces to be lined were masked and primed to enhance adhesion. The thickness of the lining ranged from 1/4" to over 1/2" on average and in some cases we cast linings 2" thick. The lining material becomes tack free in less than two minutes and can be put back into service after 24 hours. This system is much more efficient and more effective than "cut and apply" rubber alternatives. Our linings do not need to be removed when a localized wear area becomes apparent (note the red wear layer applied to the vibratory feeder) – just clean the wear area, abrade the wear area, prime and spray or cast the lining into the worn area. Our linings exhibit excellent interlayer adhesion.

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Material Handling – Sand & Aggregates

Benefits Realized:



- ✓The sprayed on linings can be installed on any component with no modification to the component design.
- ✓The dense lining material will significantly reduce noise generation – it takes the "ring" out of the substrate.
- ✓Our lining solution can be applied thicker where more wear is expected to occur.
- ✓Customers report up to a 50% decibel reduction.
- ✓Installation of this solution is significantly less than installing alternative products.
- ✓Repair downtime and maintenance cycles are reduced.
- ✓Unlike slab stock materials that are mechanically attached our linings are fully adhered to the entire substrate in a monolithic lining that does not allow for material to get behind the material causing it to fail over time.

For more information, samples and bids please contact Industrial Solutions USA.

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