

SILICON

Your partner for all refractory anchoring solutions



SpeedBolt®

**The moveable anchor system for
dynamic refractory linings in the cement and steel industry**



SpeedBolt® Cement

Moveable Anchor System

Moveable anchors are mainly used in rotary kilns where more stress occurs due to refractory movement. These conventional anchors are commonly fastened to an omega shaped bracket by manual electrode welding and tack welded so that they break 'free' during operation and 'float' within the omega bracket. However, they do not last very long and because of the poor traditional welding techniques, the anchor will breakoff.

The SpeedBolt® was developed to prevent these problems while undergoing variable loads of stress, thereby greatly reducing stresses on the refractory material. It also offers a solution to the vast number of hours that usually goes into the installation and repair work of anchoring systems, due to the Rapid Arc Welding (RAW) capability.

How it Works

The SpeedBolt® moveable anchor system consists of:

- a Rapid Arc Weldable SpeedBolt®
- a specially designed Bullhorn anchor
- a plastic clip (SpeedClip)

The SpeedBolt® anchor is welded onto a casing using RAW technology. The SpeedBolt® shank is $\varnothing 16$ mm which ensures a solid weld base for the heavy refractory load. The Bullhorn anchor is placed through the SpeedBolt® eye. Finally, the plastic SpeedClip is put in place by hand or with a hammer to securely position the anchor. The SpeedClip melts at temperatures above 220°C (428° F) giving the Bullhorn anchor freedom to move.

Dual Lining

A dual lining version has also been developed where improved insulation is required. In the case of a dual lining SpeedBolt® system, a threaded stud or shoulder stud is first welded onto the casing. The SpeedBolt® is screwed on top after the back-up layer is installed.

SpeedBolt® Steel

New Application in the HOT BLAST System

The SpeedBolt® moveable anchor loses its clip and is now tackwelded! Originally developed for cement plants, this revolutionary product is now being introduced to the steel industry.

If you're interested in learning more about our impressive results, don't hesitate to contact us: <https://silicon.nu/contact>



Overhead?
Easy!



Side hand?
No problem!



Welding on curved surfaces?
Effortless!



Pictures taken on a recent jobsite at Cemex Rüdersdorf, in Germany (2022).



SpeedBolt® after 5 years in service



Reusable (up to 12 years!)

Moveable anchors are not very reusable, not only because of the process, but also due to the intensity of the refractory removal - where they get destroyed.

The SpeedBolt® anchor doesn't require replacement during the next Turnaround and withstands the demolition process. Made of stainless steel, it can resist corrosion on the shell side for up to 12 years! This saves additional time since only new Bullhorn anchors need to be clipped into the SpeedBolt® eye, just as before.

Success Stories

SILICON handles projects worldwide, spanning from Canada to Singapore, and offers a rapid response time of 24-48 hours for emergency repairs.

Our RAW technology significantly reduces repair time, thanks to the high quality and additional advantages of the SpeedBolt®. These units perform exceptionally well, resulting in fewer repair needs and increased production throughout the year, leading to reduced downtime during Turnarounds.

Benefits of RAW

RAW offers a fast and proven method for welding anchors without the need for an electrode. The process ensures consistent high-quality welds in a matter of seconds, compared to the minutes required for stick electrode welding.

Engineered to address longstanding issues associated with conventional hand welding and stud welding technologies, RAW equipment bridges the gap between efficiency and cost-effectiveness. Thanks to the nature of our technology, we can weld studs up to $\varnothing 36\text{mm}$ and with a rejection rate of only 0,1%!

Seeing is Believing

Book an on-site or a virtual LIVE **WELDING demonstration** and see how the SpeedBolt® is welded.

Read more on our success stories!



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Corporate Mission

To transform the refractory industry into using superior anchoring systems and time saving Rapid Arc Welding services.

Corporate Vision

Our vision is to provide the technical and metallurgical expertise required to bring Refractory Anchors, and their installations, to the next level.



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