

SPEC-CON

CONCRETE REPAIR SPECIALISTS

SMOKE STACK & COOLING TOWER REPAIR SOLUTIONS



Repairing concrete smokestacks involves specialized techniques and materials to address various issues such as cracks, spalling, erosion, or other structural damage. Many structures of this nature have been identified as in need of urgent repair. Historically, due to the expense of access to the works areas and inaccurate assessments of repair scope, maintaining these structures in a cost-effective and safe manner has not been feasible— until now..."

PARTNERS

Spec-con has partnered with Delta Scan and Libra-Plant to deliver a safe and cost effective survey and repair work flow for accurate quantification of the repair needed with a safe access solution, allowing for a superior repair when compared to the alternative solutions.

LIBRA-PLANT

SALES AND SERVICE (PTY) LTD



DELTA SCAN

Engineering Intelligence Through Digital Analysis

ABOUT SPEC-CON

Spec-con Engineering (Pty) Ltd was formed in 1994 to cater for the growing need for a specialist in the field of concrete repair and rehabilitation of industrial structures. The company is manned by experienced construction professionals who specialize in extending the life of civil infrastructure, industrial and commercial buildings; using the latest technologies available.



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DRONE SURVEY INSPECTION

Delta Scan specialises in digitising and inspecting high-rise infrastructure. Their skilled engineering team transforms drone and LiDAR data into ultra-realistic digital replicas of structures, while proprietary analytics detect, classify, and quantify defects with unprecedented precision. Harnessing cutting-edge technology, they utilise specialised unmanned drones and LiDAR for Thermal and RGB data capture, providing comprehensive inspections regardless of height.

Internal mapping drones can reach the most inaccessible places, offering unparalleled insights into structural integrity. Welcome to the new era in stack inspection. Redefining the standards of high-rise structure inspection through innovative technology and advanced analytics.

BENEFITS

- Latest data capturing tools - faster, cost-effective and safer
- Quick to deploy, capture and analyse
- Comprehensive engineering defect reporting and analysis
- Cloud-based inspections
- Conversion from the scanned data to CAD/BIM
- Flue inspections, wind shell inspections, support inspections



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ACCESS SOLUTION

Mast climbers, also known as mast climbing work platforms or mast climber platforms, are specialised construction and access systems used to transport workers, materials, and equipment vertically on the exterior of buildings or structures. They consist of a platform or platforms supported by a mast or multiple masts which are attached to the building and equipped with motorised or manual lifting mechanisms.

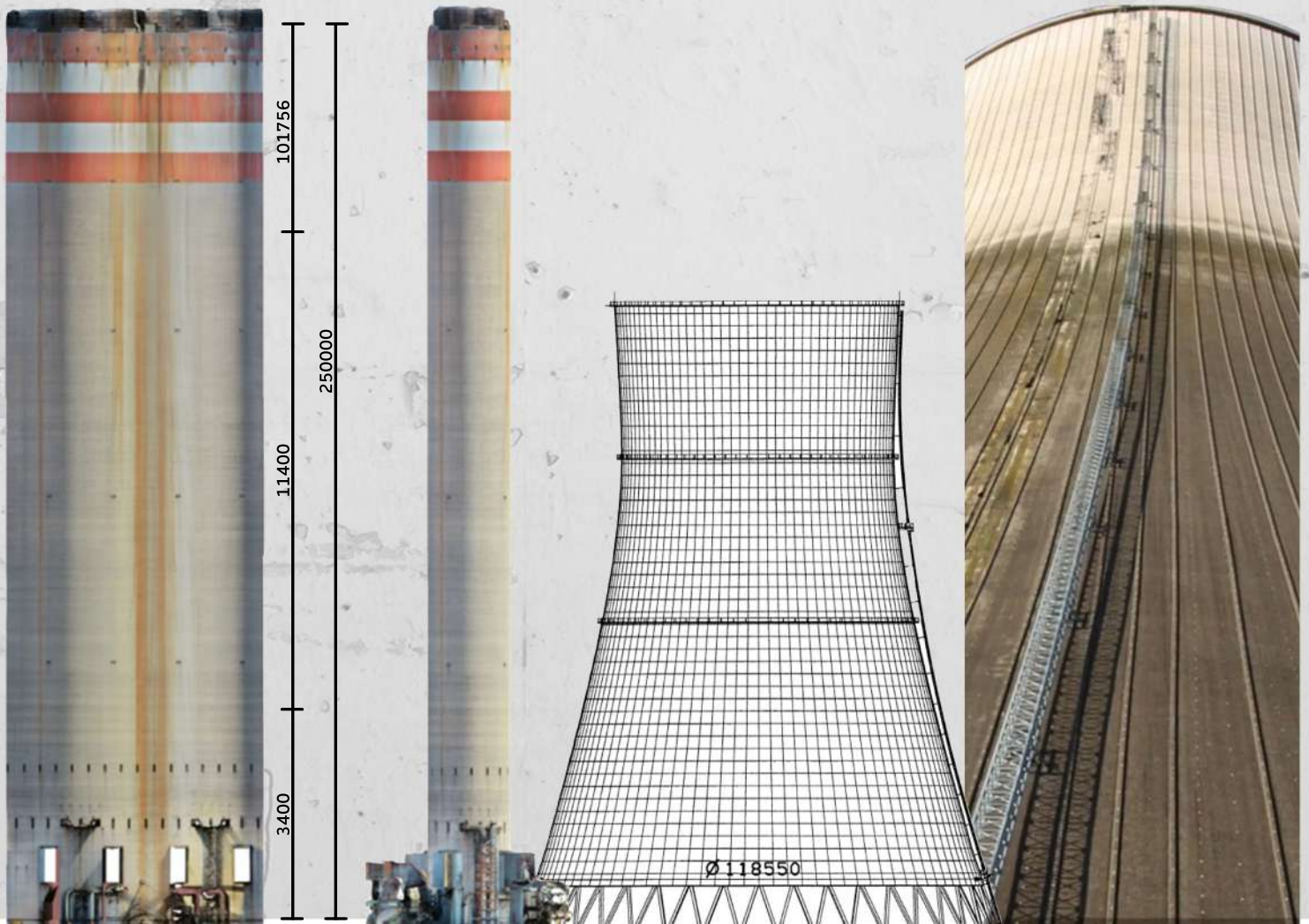
These systems offer a safe and efficient way for workers to access different levels of a building during construction, maintenance, renovation, or cleaning activities. They provide a stable working platform that can be adjusted to various heights and are particularly useful for tall or large structures where traditional access solutions might be impractical or time-consuming to set up.

TRADITIONAL ACCESS SYSTEMS

Installation of suspended platforms prove challenging and cumbersome. Heavy winds exacerbate movement issues, leading to delays in operations.

Rope access entails extensive work involving ropes and lacks adequate mechanisms for inspecting completed work, thereby compromising assurances of quality. Additionally, it presents significant risks due to the potential for falling debris from the working areas.

Scaffolding, while effective in reaching necessary heights, is not cost-efficient. It demands specialised engineering and considerable time for both erection and dismantling. Erecting the entire scaffold at once is mandatory, as partial installation is not feasible.



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Mast climbers offer advantages such as increased productivity, easier transportation of heavy materials, improved safety features including guardrails and safety interlocks, and reduced labour costs compared to traditional access solutions. They are versatile, customizable, and can be used in various construction and maintenance projects across different industries.

Spec-con has partnered with Libra Plant, who have mast-climbing working platforms available in South Africa and which are the ideal vertical access method for structures of these heights.

For smoke-stacks specifically, with their round structure, the single-mast snake-platform version of working platforms are ideal as they are customisable to the circumference of the stack. The mast sections are fixed directly to the stack preventing any major movement or delay caused by heavy winds. An Alimak lift can be installed to optimise movement of people, allowing easy, efficient and safe access for all workers, management and technical personal to conduct and inspect the works.

With Spec-con's vast experience in concrete repairs, Delta Scan's detailed diagnostic reports, and the correct access solution provided by Libra Plant, we can offer a safe and cost effective way to maintain large smoke stacks and similar structures.

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