

شركة الكنار العربية المحدودة
Arabian Al Kanar Co. LTD.

DIVISION PROFILE

Industrial Services.

Field-Erected Cooling Tower Engineering & Services

Inspection, maintenance, emergency repairs, rehabilitation and reconstruction for oil and gas, energy and major infrastructure and institutional campuses.

2011

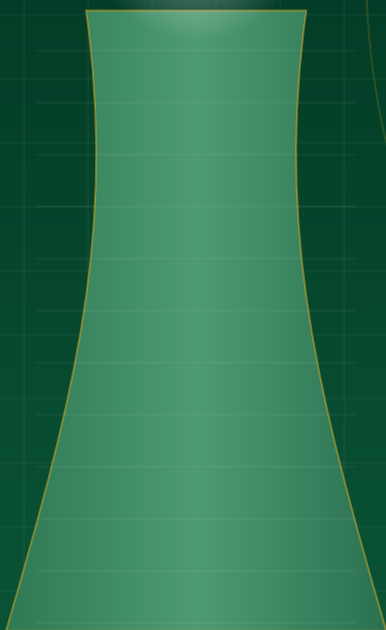
in cooling towers since

In-house

engineering and site teams

ISO

9001 · 14001 · 45001 certified



NATURAL DRAFT



MECHANICAL-DRAFT COOLING TOWER

— BY THE NUMBERS

Engineering you can **measure.**

Engineering, site execution and lifecycle maintenance for field-erected cooling towers — at gas plants, petrochemical complexes, power plants and large campuses, by our own engineers and technicians.

— OPERATING CONTINUITY

Live

tower replacement on a sulphur export unit that could not be taken offline

Stocked

fill, drift eliminators and nozzles held for planned and emergency work

15+

years of cooling tower work in the Kingdom

+42%

capacity gained from an existing tower

+25%

capacity in the same footprint

Zero

hours of shutdown during a live tower replacement

100%

Saudi-owned, headquartered in Al-Khobar

23 m

working level of our highest tower replacement

8,200

film-fill blocks held in stock

1,000 m²

drift eliminators held in stock

800

spray nozzles held in stock

9 SERVICE LINES

Inspection & condition assessment

Thermal performance testing & engineering

Shutdown & turnaround maintenance

Emergency repairs & breakdown support

Mechanical repair & reliability

Structural rehabilitation

Tower reconstruction & performance upgrades

Planned & long-term maintenance contracts

Erection & supervision

Capacity results are project outcomes from individual tower upgrades; results depend on the tower, its duty and operating conditions.

WHO WE ARE

Engineering and lifecycle support for field-erected cooling towers.

Al Kanar Industrial Services is the industrial division of Arabian Al Kanar Co. Ltd., a 100% Saudi-owned company headquartered in Al-Khobar. Since 2011 we have served oil and gas, petrochemical, power and utility operators and large institutional campuses — including Saudi Aramco and SABIC. Our engineers define the work, our own crews execute it on site, and the same team stays on to maintain the tower.

OWNERSHIP	100% Saudi-owned
HEAD OFFICE	Al-Olaya, Al-Khobar
LONG-TERM CONTRACT	SABIC long-term maintenance contract holder
VENDOR REGISTRATION	Saudi Aramco · Vendor ID 10040465
REQUIREMENTS	Experienced with Saudi Aramco, SABIC, SEC and SWCC requirements
CERTIFICATION	ISO 9001 · 14001 · 45001 — certified scope includes cooling systems

Oil & gas

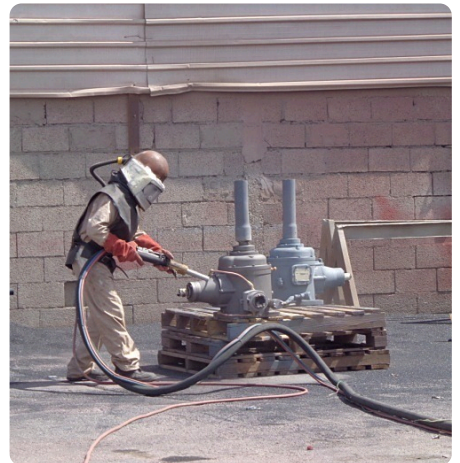
Petrochemicals & chemicals

Power & water

Universities

Healthcare

Commercial & public



In-house, end to end

In-house engineering and site teams, with clear responsibility from planning through maintenance.

OEM-aligned

Work carried out to the tower manufacturer's specifications, with support from world-leading cooling technology providers.

Zero injuries since 2011

No injuries reported since 2011 across our own staff and subcontractors — work planned to operator permit-to-work requirements under an ISO 45001-certified system.

WHAT WE DO

Every service a cooling tower needs.

From a single inspection to a multi-year maintenance partnership — for field-erected cooling towers and the heat-exchange equipment around them.

Emergency repairs, rehabilitation and component replacement across multiple cooling tower makes and models.

EQUIPMENT COVERED

Cooling towers

Wet saturated air coolers

Plate heat exchangers

Side-stream and self-cleaning filtration

Pumps

Accessories



Inspection & condition assessment

A clear picture of every tower before money is spent.

- Internal tower inspection
- Mechanical inspection — fans, gearboxes, drive shafts



Thermal performance testing & engineering

Measured performance, and upgrades engineered to a target.

- Performance testing to CTI ATC-105
- Thermal design and upgrade calculations



Shutdown & turnaround maintenance

Planned work completed inside your shutdown window.

- Fill and drift eliminator replacement
- Spray nozzle inspection and replacement



Emergency repairs & breakdown support

Repairs when a tower, fan or drive fails in service.

- 24/7 emergency line and site mobilisation
- Fan blade, gearbox and drive repairs from stock



Mechanical repair & reliability

Fans, gearboxes and drives kept true, balanced and quiet.

- Laser shaft alignment
- Vibration analysis



Structural rehabilitation

Restoring the structure that carries the tower.

- Timber replaced with FRP structural shapes
- FRP repairs and epoxy coating of steel



Tower reconstruction & performance upgrades

More cooling from an existing tower and footprint.

- Complete tower reconstruction
- Fill, distribution and fan upgrades



Planned & long-term maintenance contracts

Annual and multi-year maintenance for operating plants.

- Monthly, quarterly or annual visits
- Long-term maintenance contract holder for SABIC



Erection & supervision

New towers and component packages installed correctly first time.

- Complete tower erection
- Erection supervision

SUPPORTING CAPABILITIES

Temporary cooling

Rental cooling towers

Spare parts from stock

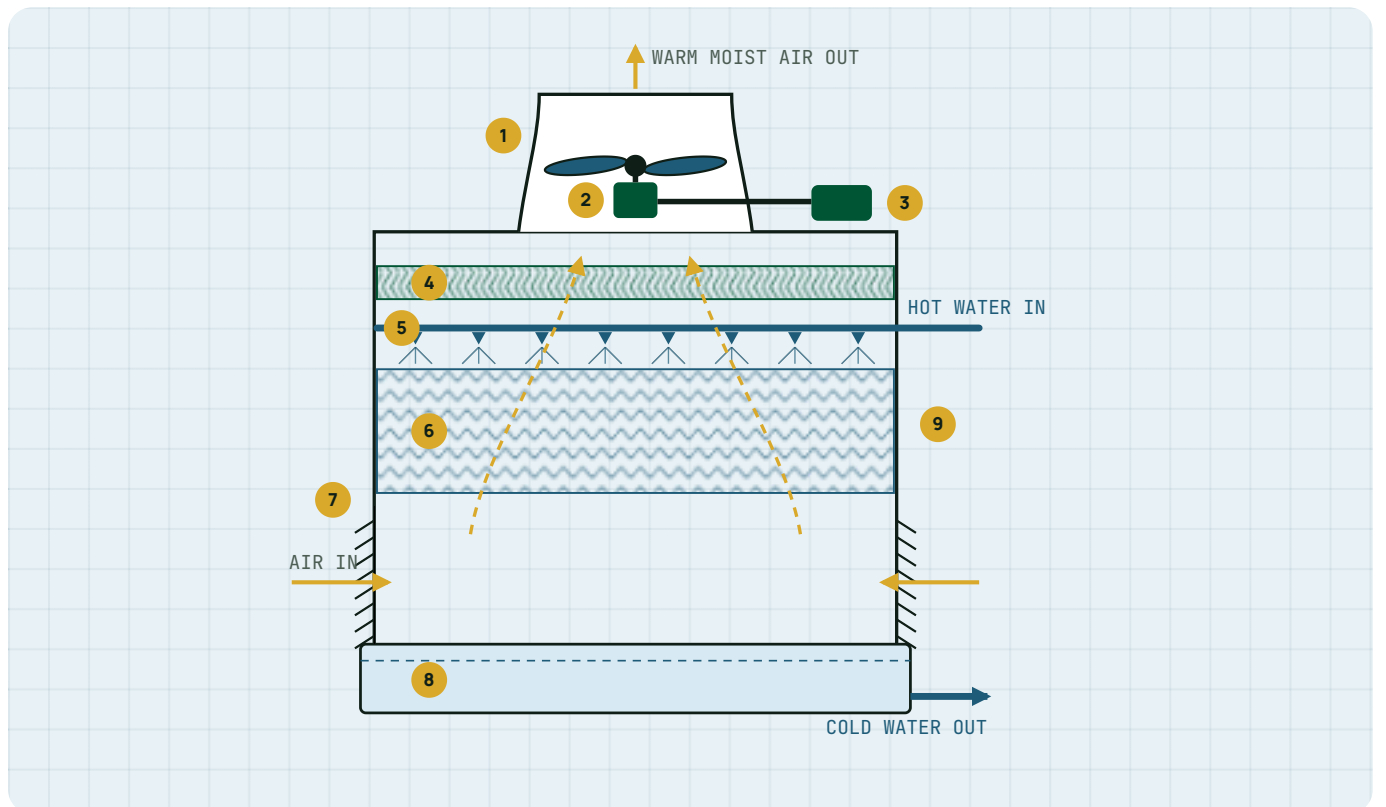
Equipment supply

INSIDE A COOLING TOWER

Every component, one accountable team.

Air is drawn up through falling water; a small part evaporates and the rest is cooled. Each component affects the others – so we engineer changes for the whole tower, not part by part.

1 Fan & fan stack Mechanical reliability	2 Gearbox & drive shaft Mechanical reliability	3 Motor Mechanical reliability
4 Drift eliminators Drift eliminator replacement	5 Water distribution & nozzles Distribution & nozzle repair	6 Fill media Fill cleaning, replacement, upgrade
7 Air inlet louvres Structural & FRP repair	8 Cold-water basin Basin cleaning & repair	9 Structure & casing Structural & FRP repair



Illustrative induced-draft counterflow arrangement. Component layouts vary with tower design.

WHAT A TOWER TELLS YOU

Cold-water temperature too high

Performance test, fill cleaning or replacement, nozzle repair, fan blade angle setting

Vibration or noise from the fan

Laser alignment, vibration analysis, gearbox overhaul, blade repair and pitch setting

Drift and water loss

Drift eliminator replacement (0.0005% of circulating flow), distribution repair

TURNAROUND & CONTRACTS

Planned work, inside your shutdown window.

Turnaround work follows one clear sequence, with a report at both ends so every decision is documented.



Long-term maintenance contract holder for SABIC

The same team, procedures and spares serve every customer – from one inspection to multi-year contracts.

TURNAROUND SERVICES



01

Inspect

Inspect the tower and its mechanical equipment.



02

Report

Identify problems and recommend the right fix.



03

Supply

Supply spare parts from stock.



04

Repair

Repair, service or reconstruct the tower.



05

Verify & hand over

Agreed inspections, functional checks or thermal testing, then completion records and recommendations.

ANNUAL MAINTENANCE CONTRACTS

- ✓ Monthly, quarterly or annual visits
- ✓ Internal and mechanical inspections
- ✓ Water analysis
- ✓ Recommendations after every visit
- ✓ Parts supply and breakdown service
- ✓ 24/7 emergency line, technical support and site mobilisation



Documented tower histories

Maintenance teams supported by tower histories, inspection findings and previous repair records.

Parts ready before they are needed

Wear parts held in our own warehouse and matched to your towers.

Every visit documented

A written report and recommendations after each inspection and job.

RECONSTRUCTION & UPGRADES

Engineered upgrades, not like-for-like swaps.

A cooling tower's structure, fill, water distribution and fans work as one system. A part substituted without regard to the others can produce a different result from the one expected.



Structural integrity

Decayed timber or corroded steel puts the tower, and the people working on it, at risk.

- Structural timber repaired or replaced
- Timber replaced with fibreglass (FRP) structural shapes
- Epoxy coating of steel parts

Thermal performance

Fouled, collapsed or outdated fill returns warmer water to the process.

- High-performance film fill for colder water in counterflow towers
- Grid fill, or film and grid combined, to suit water quality
- Crossflow fill upgrades and stronger fill supports
- More thermal performance from the existing footprint

Water distribution

Broken pipes and clogged nozzles leave dry zones in the fill and waste capacity.

- Distribution pipes repaired or replaced in FRP or PVC
- Improved spray nozzles that resist displacement and clogging
- Crossflow distribution upgrades

Mechanical reliability

Misalignment, vibration and worn gearboxes cause trips and unplanned outages.

- Fan assemblies, gearboxes and drive shafts repaired or replaced
- Vibration and oil-level switches
- New fan designs for more airflow and lower fan power
- FRP fan blades

HOW WE ENGINEER AN UPGRADE

01

Measure

Thermal performance test to CTI ATC-105 and a condition survey

02

Design

Thermal and structural calculations in-house, aligned with the tower OEM

03

Rebuild

Our own teams, tools and stocked parts on site

04

Verify

Agreed performance verified through post-completion testing, where specified

FEATURED PROJECT

Replaced at 23 metres – without stopping the unit.

Sulphur export unit, major gas plant, Eastern Province.

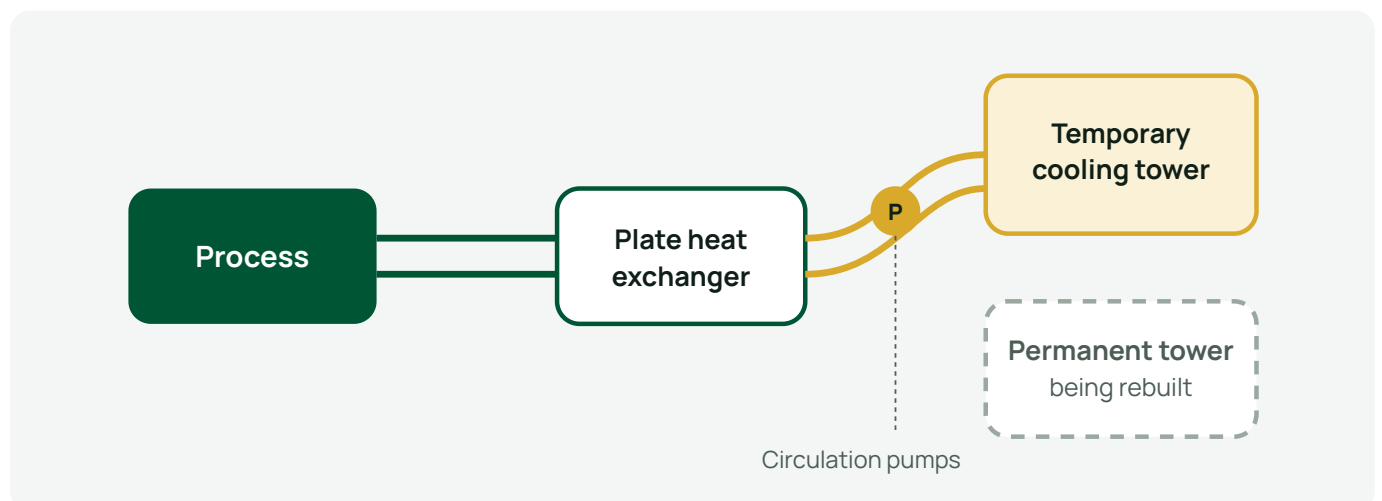
A wooden crossflow tower had reached the end of its life on a unit that could not be taken offline.

Replaced it with a non-metallic FRP counterflow tower at 23 m basin level, while a temporary system – cooling tower, plate heat exchanger and circulation pumps – kept the unit running.

- ✓ No unit shutdown
- ✓ Work at 23 m basin level under strict safety controls
- ✓ Wooden crossflow tower replaced with a non-metallic FRP counterflow tower



HOW THE UNIT KEPT RUNNING



PROJECTS

More cooling, less downtime.

Selected rehabilitation, upgrade and emergency projects for energy producers and large campuses in Saudi Arabia and Bahrain.



Fill replacement inside an operating tower



Tower internals during rehabilitation

NGL PLANT · ABQAIQ

Wet-section structure upgrade

PROBLEM

The wooden structure of a combined cooler's wet section, including its hot-water basin, had deteriorated.

SCOPE

Replaced the complete wooden structure and hot-water basin with FRP sections.

RESULT

Wood to FRP, complete structure

POWER PLANT · BAHRAIN

Emergency fan blade repair

PROBLEM

FRP fan blades across a bank of cooling tower fans were damaged and needed urgent repair.

SCOPE

Repaired the FRP blades on all affected fans on an emergency basis.

RESULT

16 fans repaired on emergency call-out

HOSPITAL COOLING PLANT · AL-AHSA

Wooden tower to FRP counterflow

PROBLEM

An ageing wooden crossflow tower needed replacing without interrupting hospital cooling.

SCOPE

Replaced it with an FRP counterflow tower on the existing basin, using a temporary tower during the changeover.

RESULT

+25% capacity, same footprint

MEDICAL CITY · RIYADH

Concrete tower upgrade

PROBLEM

More cooling capacity was needed from an existing concrete cooling tower.

SCOPE

Replaced the tile fill with high-performance grid fill inside the same concrete structure.

RESULT

+42% capacity, same structure

UNIVERSITY IT CENTRE · EASTERN PROVINCE

Concrete cooling tower – design and supply

PROBLEM

A new concrete cooling tower was required for a university IT facility.

SCOPE

Designed and supplied the tower, including its civil structural design and ceramic tile fill.

RESULT

Design to supply, including civil

EQUIPMENT & COMPONENT SUPPORT

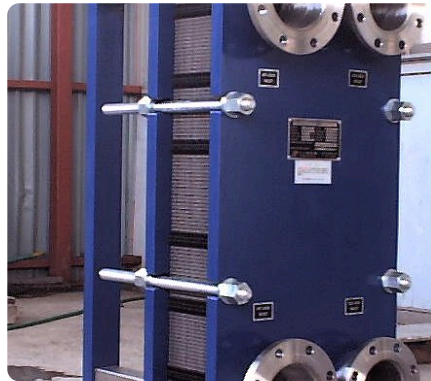
Equipment behind every rebuild and replacement.

Rehabilitation, replacement and temporary cooling often need new equipment as well as labour. We engineer, select and supply the towers, heat exchangers, pumps and filtration involved — then install and support them.



Cooling towers

Industrial cooling towers and packages.



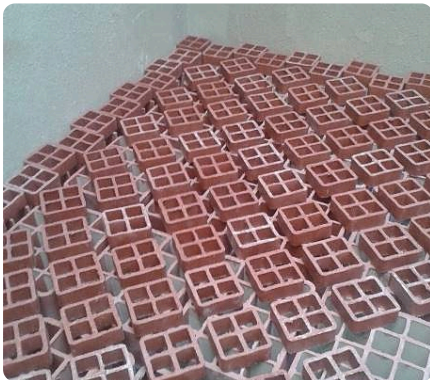
Heat exchangers

Plate heat exchangers (PHE) and hairpin heat exchangers.



FRP cooling towers

New fibreglass (FRP) cooling towers, with FM-approved models available.



Concrete cooling towers

Design and supply, including civil structural design. Pictured: ceramic tile fill used in a concrete tower.



Rental cooling towers

Temporary capacity for outages, upgrades and peak demand.

ALSO ENGINEERED & SUPPLIED



Sea water filters

Filtration for sea water cooling circuits.



Side-stream filtration

Side-stream and self-cleaning filtration systems.



Complete cooling systems

Towers, heat exchangers, pumps and filtration engineered as one system.

Selected for your duty

Sized to your heat load, site conditions and water quality — not taken from a catalogue.

Installed by our teams

Layout, erection and commissioning by the engineers who selected the equipment.

Lifecycle maintenance and spare-parts support

Maintenance contracts, stocked spares and performance testing.

SPARE PARTS

Parts on the shelf, not on order.

We hold the cooling tower parts that wear out most in our own covered warehouse, so they reach site within a short time — even during an unplanned outage. Every component is selected for the existing tower configuration and its operating conditions.

8,200

film-fill blocks in stock

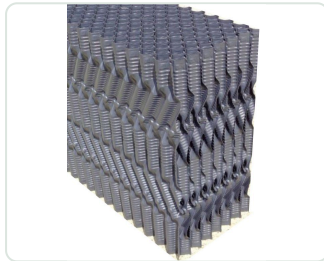
1,000 m²

drift eliminators in stock

800

spray nozzles in stock

Indicative stock levels. Confirm current availability when ordering.



Film fills

High-efficiency film-fill packs.



Grid fills

Grid fills for industrial cooling towers.



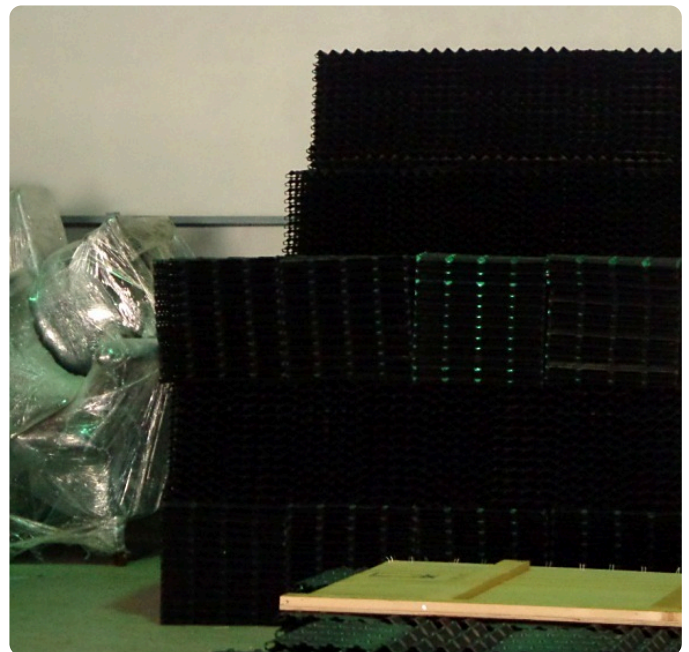
Drift eliminators

High-efficiency drift eliminators — drift rate 0.0005% of circulating water flow.



Spray nozzles

Spray nozzles and water distribution parts.



Planned shutdowns

Parts staged before the window opens, so work starts on day one.

Emergency call-outs

Replacement fill, eliminators and nozzles taken straight from stock.

Upgrades

High-efficiency fill and low-drift eliminators for better performance.

RESOURCES & QUALITY

Equipped, experienced and certified.

Our own engineers, site supervisors, technicians, specialist tools and warehouse – working to the requirements of the Kingdom's leading operators.

Engineering

Thermal, mechanical and structural (FRP) engineering in-house

Site execution

Our own crews and supervision on every job

Inspection & testing

Laser alignment, vibration analysis and CTI ATC-105 thermal testing

Saudi Aramco

SABIC

Saudi Electricity Company (SEC)

Saline Water Conversion Corporation (SWCC)

CERTIFIED SCOPE

Design, engineering, procurement, field services and maintenance operations in mechanical, **cooling systems**, electrical, instrumentation, and gas and flame detection systems.

RESOURCES

- ✓ Dedicated engineers and skilled technicians
- ✓ Covered and secured warehouse
- ✓ Fill gluing machine
- ✓ Hydro-jetting pumps
- ✓ FRP drilling and repair tools
- ✓ Torque wrenches in all sizes
- ✓ Generator and compressor sets
- ✓ Mechanical equipment alignment tool kit
- ✓ Fan blade angle setting tools



STANDARD	CERTIFICATION BODY	ACCREDITATION	CERTIFICATE NO.	VALID TO
ISO 9001:2015 Quality management	SOCOTEC Certification UK	UKAS	SCUK007060QM	14 Aug 2027
ISO 14001:2015 Environmental management	Recto Solutions	IAS	IAS2710141324	26 Oct 2028
ISO 45001:2018 Occupational health & safety	Recto Solutions	IAS	IAS2710451325	26 Oct 2028

FROM OUR SITES

Work you can see.

Photographs taken by our own teams on cooling tower sites.



Before cleaning



After hydro-jet cleaning



Fill gluing



Epoxy coating of steel parts



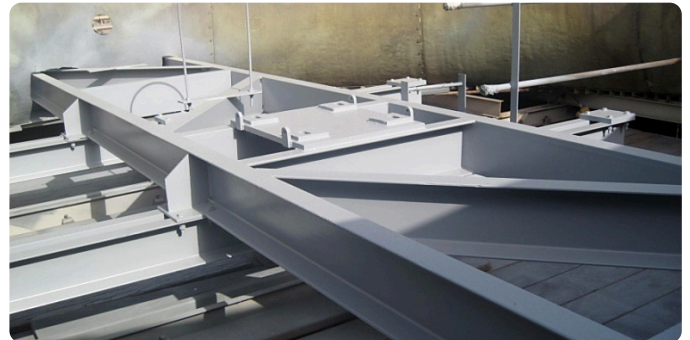
Mechanical equipment alignment



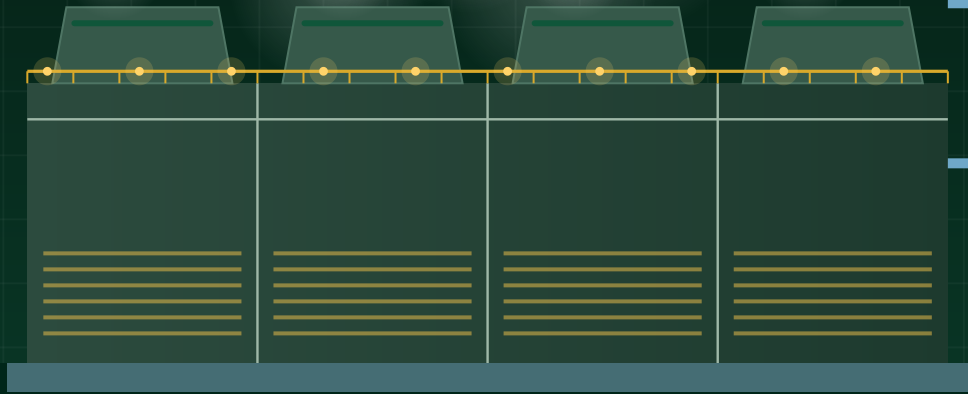
Nozzle inspection and replacement



FRP fan blades before repair



Structural steel after coating



— AL KANAR INDUSTRIAL SERVICES

Engineering, rehabilitation and lifecycle support for **field-erected cooling towers.**

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