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IS WATER LEAKAGE WORRYING YOU TOO MUCH?
INTRODUCTION

Al-Taief Engineering L.L.C. (ATE) was established in 2008 with general construction. From there, it was an exciting journey as we specialized in the waterproofing division by 2009. And never looked back since a steady road to successful affiliations.

The bragging rights go to an extraordinary team of professionals with proper experience to analyze, detect & estimate any leakage case, and provide the right, direct and most economical solutions with guaranteed results. But its not about the destination, for our journey still has miles to go. And many projects and beyond to mark as milestones along the way.

We at ATE, welcome your company and the unique opportunities we could discover together. Happy further reading!
WE ARE ALWAYS STRIVING, AND IMPROVING IN THE PURSUIT OF EXCELLENCE
VISION AND MISSION

To be a centre of excellence at the heart of the Waterproofing, Leakage Treatment, Engineering and related business sectors.
Responsiveness - To be responsive to employers, stakeholders and clients (and potential clients) by developing products and services to meet their needs, which we will establish through consultation and feedback.

Effectiveness - To be effective by offering a quality service and delivering quality outcomes through the deployment of our resources and those of our selected partners.

Efficiency - To be an efficient and well run company, professionally managed working with associates who hold those same values.
**CAPABILITIES**

ATE started in waterproofing division and specialized in Crystalline Waterproofing as well as the treatment of concrete leakages in all types and parts of buildings. And our portfolio of dozens major projects over U.A.E.

ATE proudly became the only approved applicators for all PENETRON products as well as distributors and applicators of ISOMAT materials in U.A.E. providing up to 25 years warranty on the executed job weather in under construction buildings or old building leakages issues

Authorized applicators of [PENETRON](#) products

Applicators & distributors of [ISOMAT](#) products
SOMETIMES, IT’S NOT ENOUGH TO GO THE FAMILIAR ROUTE. IT WORTH TO THINK OUT OF THE BOX.

AND WE PROVIDE ADVANCED SOLUTIONS IN WATERPROOFING & LEAKAGE TREATMENT
MAKING IT CRYSTAL CLEAR: THE ADVANTAGE OF CRYSTALLINE WATERPROOFING

In 1943, Lauritz Jenson patented the Active Crystalline Concrete Waterproofing Method. Ever since, the cutting edge Crystalline Technology provides a high level of performance to concrete mixtures, materials, and structures and enhances the quality and ease of maintenance in building projects. Crystalline Technology improves the durability and performance of concrete structures, lowering their maintenance cost and extending their lifespan by protecting them against the effect of aggressive chemicals. These high performance qualities result from the ways in which the Crystalline Technology works, when used with concrete.

HOW IT WORKS

The waterproofing effect is based on two simple reactions, one chemical and one physical. Concrete is chemical in nature. When a cement particle hydrates, the reaction between water and the cement causes the concrete to become a hard, solid mass. The reaction also generates chemical byproducts such as calcium hydroxide, sulfates and carbonates of sodium potassium and calcium as well as unhydrated or partially hydrated cement particles all of which reside in the capillary tracts of the concrete.
Crystalline waterproofing introduces another set of chemicals to the concrete. When these two chemical groups, the by-products of cement hydration and the crystalline chemicals, are brought together in the presence of moisture, a chemical reaction occurs. The end product of this reaction is a non-soluble crystalline formation. This crystalline formation can only occur where moisture is present, thus it will only form in the pores, capillary tracts, and shrinkage cracks of the concrete. Wherever water goes, crystalline waterproofing will form filling the pores, voids and cracks.

From foundations, floor slabs and exterior pre-cast panels, to water treatment facilities and underground urban infrastructure, concrete is the mandatory ingredient to building and construction. However, due to its composition, a mixture of rock, sand, cement, and water, concrete is often susceptible to damage and deterioration from water and chemical penetration. The deleterious effects of damage caused by water leakage over time can be avoided through the use of Crystalline Waterproofing technology, which effectively improves the durability and lifespan of concrete structures, thereby reducing long-term maintenance costs.
When the crystalline waterproofing chemicals spread into and through the concrete, they become available to the by-products of cement hydration, thus allowing the chemical reaction to take place forming a non-soluble crystalline structure. As the chemicals continue to diffuse through the water, the crystalline growth will form behind the advancing chemical front. The reaction will continue until the crystalline chemicals are either depleted or run out of water. Chemical diffusion can carry these chemicals up to 12 inches into the concrete. If water has permeated two inches into the substrate, then the crystalline chemicals can only diffuse to this depth but, they still have the potential to penetrate 10 inches further.

**Crystalline Technology waterproofs and improves the durability of concrete structures by filling and plugging the pores, capillaries and micro-cracks with a non-soluble, highly resistant crystalline formation.**

Because these crystalline formations are within the concrete and are not exposed at the surface, they cannot be punctured or otherwise damaged like membranes or surface coatings. Crystalline waterproofing is highly resistant to chemicals where the pH range is between 3 and 11, under constant contact, and 2 to 12 under periodic contact. Crystalline waterproofing will tolerate temperatures between -25 degrees Fahrenheit (-32 degrees Centigrade) and 265 degrees Fahrenheit (130 degrees Centigrade) in a constant state. Humidity, ultraviolet light, and oxygen levels have no impact on the products ability to perform.
ADVANTAGES

In construction, it always makes a difference when quality comes without a constricting shelf-life. And this was the driving force behind introducing the Crystalline System of waterproofing for concrete structures.

Traditionally, all common waterproofing for concrete structure (bituminous liquids/membranes, GRP lining, PVC etc.) depend on covering the concrete surface in order to prevent the external bordering water and aggressive chemicals which affect the concrete durability from penetrating into the concrete structure and re-bars (through pores or any existing gaps in the structure), once that wrapping layer been partially deboned or damaged due to any external agent the entire layer will be expired as the water will go through and penetrate the structure in many parts.

Instead of reducing the porosity of concrete, like water reducers and super plasticizers, the crystalline formation fills and plugs the voids in concrete becoming an integral and permanent part of the structure. More traditional methods of protecting concrete still leave it open to chemical and water damage. Membranes and other coatings are susceptible to errors caused by faulty workmanship such as pinholes, improperly sealed seams, blistering, de-lamination and damage during backfilling. Unlike crystalline waterproofing, they also deteriorate over time and lose their effectiveness.

Crystalline waterproofing offers protection against the following agents and phenomena:

- Inhibits the effects of CO, CO2, gasses responsible for the corrosive phenomenon known as ‘carbonation’ a process in which exterior gasses create a corrosive phenomenon that softens the surface layers of the concrete. Carbonation testing shows that the crystalline formation in the capillary tracts reduces the flow of gases into concrete, thus significantly retarding carbonation.

- Protects concrete against alkali aggregate reactions (AAR) by denying water to those processes affecting reactive aggregates.

- Chloride ion diffusion testing shows that crystalline waterproofing reduces the diffusion of chlorides in concrete structures. This helps protect reinforcing steel and prevents deterioration that could occur from oxidation and expansion of steel reinforcement.
LEAKAGE TREATMENT

A. Preparation of infected concrete structure:
Preparation works must be done in all those parts where the water could penetrate through. This is very important before application of crystalline materials on the damaged (leaking) concrete in order to obtain the maximum bonding, protection and desired results. Preparation works must include the following parts (if any):

1) Construction-joints.
2) Cold-joints.
3) Cracks.
4) Corroded parts.
5) Honeycombs.
6) Tie-rods holes.
7) Pipes, cables, electrical conduits, boxes & sleeves circumference.

B. Infected steel re-bars treatment/replacement (if requires):
Due to the long time negligence of water leakage issues, concrete structure can be corroded by the aggressive chemicals. Accordingly, steel re-bars could be affected as well, whether by getting rusty or corroded; these cases must be deal with and reinforcement steel should be treated properly (or even replaced) before conduct any plastering or waterproofing works.

C. Surface preparation:
The substrate surface must be porous, free of oily residues, loose material, dust, etc. For that purpose, the surface should be grinded or water blasted using high pressure water washer in order to clean the surface and to open the pores to receive crystalline materials. For better bonding and to stimulate crystals formation concrete should be well saturated with water before materials application.
D. Repair/Mortars fill:
All prepared parts as well as any other cavities in the concrete structure should be filled/plastered with crystalline mortar.

E. Active leakage plug:
Any active leakage points should be plugged using rapid-set crystalline mortar.

F. Full crystalline protection:
Application of crystalline slurry on the entire surface will achieve a permanent protection and sealing against any expected water seepage, materials reacts with the existing water and crystals will be built gradually inside the concrete structure.
When crystalline waterproofing is applied to the surface, either as a coating or as a dry-shake application to a fresh concrete slab, a process called chemical diffusion takes place. The theory behind diffusion is that a solution of high chemical density will migrate through a solution of lower chemical density until the two equalize what called Osmosis phenomenon.

Thus, when concrete is saturated with water prior to applying crystalline waterproofing, a solution of low chemical density is introduced into the porosity concrete. When crystalline waterproofing is applied to the concrete surface, a solution of high chemical density is created, triggering the process of chemical diffusion.
Existing basements that are subject to water seepage through foundation walls and floors can be treated by the application of crystalline waterproofing on the negative side, or inside, of the structure. Coatings that depend on their adhesion to the surface will blister and peel when moisture seeping through the concrete dissolves soluble minerals and deposits them on the surface, under the coating, in the form of efflorescence, a white powdery substance that forms on the concrete surfaces. Because crystalline waterproofing penetrates into the concrete, plugging the pores beneath the surface, it does not depend on surface adhesion and will therefore not blister and peel off, like surface coatings.

Vapor transmission through basement floors and walls is a common problem that may lead to damp, musty odors. Testing has shown that the application of crystalline waterproofing under these conditions can reduce vapor flows as much as 50 percent, which in most cases, will result in a drier environment.
# COMPARATIVE ANALYSIS

<table>
<thead>
<tr>
<th>#</th>
<th>PROPERTIES</th>
<th>CRYSTALLINE SYSTEM</th>
<th>MEMBRANE WATERPROOFING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technology</td>
<td>Crystalline waterproofing technology. End products with crystalline structure</td>
<td>Acts only as a barrier on the top surface.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>penetrate through the pores and capillary tracts of the concrete mass preventing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>the intrusion of water and aggressive chemicals from any direction.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dependence on adhesion</td>
<td>No—becomes an integral part of concrete</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Deterioration problems</td>
<td>Not present</td>
<td>Present</td>
</tr>
<tr>
<td>4</td>
<td>Surface requirement</td>
<td>Wet</td>
<td>Dry</td>
</tr>
<tr>
<td>5</td>
<td>Requirement of costly surface priming or leveling</td>
<td>Not required</td>
<td>Required</td>
</tr>
<tr>
<td>6</td>
<td>Sealing capacity</td>
<td>Can seal hairline cracks up to 0.4 mm dia.</td>
<td>Depends on the solid content and flexibility of the polymer and the filler power used.</td>
</tr>
<tr>
<td>7</td>
<td>Life</td>
<td>Permanent</td>
<td>Not permanent</td>
</tr>
<tr>
<td>8</td>
<td>Self-healing capacity</td>
<td>Present. At any later stage, when gets in contact with water, the crystalline</td>
<td>Not present. Even if accidental damage to the coating occurs, it leads to failure resulting in huge investments for repairs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>process initiates and seals the cause for leakage.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Necessity of protection during back filling</td>
<td>Not necessary resulting in considerable reduction of material cost, labour cost and above all time.</td>
<td>Necessary. To protect the thin film coating, plastering has to be done resulting in additional costs for materials and labour and time.</td>
</tr>
<tr>
<td>10</td>
<td>Application user friendliness</td>
<td>Very much user friendly. Can be brush coated on the negative (or) the positive side (water pressure), works head on water pressure and also on the green and old concrete.</td>
<td>Cumbersome. Coating has to be done only on the positive side</td>
</tr>
<tr>
<td>11</td>
<td>Necessity of additional materials</td>
<td>Does not require sealing, rapping and finishing of seams at corners, edges (or) between membranes, resulting in the reduction of considerable additional cost for waterproofing.</td>
<td>Sealing, lapping and finishing of seams have to be carried out with other sealants for effective waterproofing thereby the total cost of waterproofing process would increase.</td>
</tr>
<tr>
<td>12</td>
<td>Hydrostatic pressure withstanding capacity</td>
<td>1.2 MPa (the maximum limit of the treating apparatus)</td>
<td>Depends on the thickness and quality of the coating</td>
</tr>
<tr>
<td>13</td>
<td>Action on aggressive chemicals</td>
<td>Not affected by wide range of aggressive chemicals, where pH range is between 3.0 and 11.0 constant contact. And 2.0 to 12.0 periodic contact and also protects the reinforcing steel from the rust accelerating electrolyte.</td>
<td>Not recommended for areas with high chloride and sulfate content.</td>
</tr>
<tr>
<td>14</td>
<td>Application</td>
<td>Carried out by the technical team of AL TIEF ensuring strict quality control in every phase to render complete solution for the project</td>
<td>As a general practices application part is handled by applicators whole technical proficiency and quality control supervision may not be to the required high standards</td>
</tr>
<tr>
<td>15</td>
<td>Warranty</td>
<td>Manufacturers guarantee is provided and the whole responsibility is undertaken.</td>
<td>Only applicators guarantee will be provided and in case of disputes, passing the responsibility to the manufacturers may result in not getting the complete solution.</td>
</tr>
</tbody>
</table>
WE LET STARS DO THEIR THING, AND WE COVER THEIR BACKS. AND WE KNOW WE ARE THE BEST

A chain is only as strong as its weakest link. A building is only as strong as its founding structural processes. And waterproofing is our specialty. And our work philosophy in construction, our inspiration to work uncompromisingly for perfection, ensures that our service quality comes without a constricting shelf-life. The Crystalline System of waterproofing for concrete structures ensures that our services not only meet your expectations, but gives unfettered delight time after time.
HSE Policy

- Introduction
- Health and Safety Policy
- Responsibility
- Arrangements
- Risk Control
- ATE Cardinal Rules
**Introduction**

**Purpose:**
Our primary aim is maintaining and further developing a first class safety culture within Al-Taief Engineering L.L.C. The Company is fully committed to the prevention of accidents, injuries and ill health. One of the key objectives within Al-Taief Engineering L.L.C. is to ensure continual improvement to reduce accidents, ill health and incidents. Al-Taief Engineering L.L.C. focused on developing a positive and proactive health and safety culture, not only for our own people, but also for our suppliers and sub-contractors. Health and Safety is at the heart of all we do, it one of our priorities and values, and is at the top of our board and management. We are not satisfied with mediocrity and we want to achieve our goal of zero accidents (God willing).

We are fully committed to ensuring that the Company complies with its health and safety legal obligations.

The purpose of this document is intended to provide information to all Al-Taief Engineering L.L.C. employees on the company’s Organization and Arrangements for Health and Safety to ensure a safe working environment and to set out management and employee responsibilities to enable them to maintain the same.

**General:**
This document has therefore been prepared to define the way Al-Taief Engineering L.L.C. intends to manage Health and Safety and meet its obligations under section 2 (3) of the Health & Safety at Work Act 1974 and OHSAS 18001:2007, which requires an Employer to prepare a statement of general policy with respect to the Health and Safety of employees and the organization and arrangements set-up to carry out the policy. It is drawn up taking into account the general duties of the Health and Safety at Work Act 1974, which simply summarised as follows: (Note that this is not a legal interpretation of the Act)
The Employer must ensure, so far as reasonably practicable, the Health and Safety or work of his employees by providing:

- A safe system of work.
- Safe plant and equipment.
- Safe means of handling, transporting, etc. articles and substances.
- Adequate training, instruction, information and supervision.
- A safe place of work with safe access to and egress from the place of work.
- A safe and healthy environment.
- Adequate welfare facilities.
- Arrangements for joint consultation where Safety Representatives have been appointed.

The employer must also ensure that the way his work is carried out does not, so far as reasonably practicable, affect the Health and Safety of persons other than his employees, e.g. other contractors, visitors, public.

**Health and Safety Policy Statement:**

Al-Taief Engineering L.L.C. is fully committed to achieving zero injuries, zero cases of work related ill health and zero dangerous occurrences (God willing).

The health & safety (H&S) of everybody associated with our work is important to us and, recognizing this, Safety is both the first Al-Taief Engineering L.L.C Value and the first of Three Pillars in our Performance Model.

We recognize that we need to continue improving to provide a safe and healthy environment for everybody affected by our work; employees, sub-contractors, customers and members of the public.

In everything we do compliance with relevant legislation, codes of practice, specific industry requirements and our own cardinal rules is the minimum acceptable level of performance.

1. **Management and Leadership**
   - Directors and Site Managers will provide visible leadership in H&S matters, consider H&S as an integral part of the business and carry our regular site Senior Manager Inspections.
   - Site Managers and Supervisors will act as role models taking responsibility for delivering a healthy and safe workplace for their own teams.
   - Nobody will ask or allow any person to undertake a task unless it can be completed safely.

2. **Managing Risk**
   - Al-Taief Engineering L.L.C. will assess risk at design, planning and execution stages and, where reasonably practicable, eliminate, reduce or implement controls to ensure risk levels are acceptable.
   - Risk associated with new activities, plant, processes, procedures, substances and equipment will be assessed in advance in order to implement safe systems of work.

   - All employees will be actively encouraged to engage in H&S through our BeSafe programme.
   - Information, instruction and training, will be provided to ensure all employees are competent to undertake their duties without risk of injury and ill health.
   - All employees will be made aware of their own responsibilities for H&S.
4 Working with Suppliers and Sub-Contractors
- Subcontractors’ capability and competence will be assessed and continually monitored.
- Key suppliers and subcontractors will be engaged and involved in our improvement programme.

5 Setting Plans and Targets
- Targets will be reviewed and set annually for both leading and lagging H&S measures.
- Improvement plans will be developed, implemented and monitored to support this policy and drive improvement.

6 Effective Procedures and Guidance
- The safety management system will be maintained and developed as a comprehensive guide to our people to safe working practices and procedures.
- Our BS OHSAS 18001:2007 accreditation will be maintained.

7 Reporting/Reviewing and investigating
- The in-house team of H&S professionals will be maintained and developed to provide support across the company.
- Performance will be reported, measured and reviewed against targets to identify deficiencies and drive improvement.
- Accidents, incidents and near misses will be reported and analyzed/investigated to learn lessons and feedback improvements.

8 Effective Assurance via auditing
- The in-house advisory team will carry out regular inspections to check compliance with our management systems.
- We will maintain and internally audit our certification to BS OHSAS 18001:2007 which will be verified by an external certification body.
- We welcome audits by customers as an opportunity to learn and improve.
- The Directors will report on performance and review the effectiveness of this Policy and our H&S performance at regular strategic review meetings.

Responsibility:

Technical Services Director (could be the site manager/engineer himself in small jobs):
Reporting to the Board of Directors the Technical Services Director (could be the site engineer himself in small jobs) has been appointed and is responsible for health and safety for all Company Operations in the site. This appointment does not absolve any of the Company Directors from their collective or individual responsibilities.

Responsibilities include:
- Ensure that there is an up to date statement of the Companies Policy for Health and Safety and that it is brought to the attention of all Employees.
- Ensure that there are instructions for the organization and methods for carrying out the Company Policy and make sure that each person is aware of their responsibilities and the means by which they can carry them out.
- Institute reporting, investigation and costing of injury, damage and loss. Promote analysis of investigations to discover root causes and trends to eliminate hazards and to ensure the prevention of recurrence.
- Ensure adequate personal knowledge and understanding of Health and Safety matters and arrange required trainings.
- Ensure suitable disciplinary measures are conducted on individuals that fail to discharge satisfactorily their responsibilities for Health and Safety.
- Set a personal example when visiting sites by complying with site induction requirements and by wearing appropriate personal protective clothing.
- Ensure that senior management Health and Safety inspections are undertaken each calendar month.
- Arrange for regular meetings with the Health and Safety Manager to discuss company accident prevention, performance, possible improvement areas.
- Ensure Health and Safety arrangements and responsibilities have been identified, formulated and implemented by direct reports.
- Regularly review the performance of direct reports and ensure they discharge their responsibilities.
- Ensure direct reports are aware of their responsibilities and have received appropriate training to fulfil their roles.
- Ensure sufficient resources are available to allow the business to fulfil its statutory health and safety obligations.

Business Unit Managers & Departmental Heads:
As direct reports, Business Unit Managers and Departmental Heads are responsible and accountable to their Director for the standard of Health and Safety for their regions and departments and staff under their control.
Responsibilities include:
- Ensure Contracts Managers and Line Managers have received adequate Health and Safety training to enable them to fulfill their responsibilities in line with the requirements of this Policy and the Safety element of the Integrated Management System.
- Regularly review the performance of direct reports and ensure they discharge their responsibilities.
- Ensure sufficient resources are available to allow the business unit and department to fulfill its statutory Health and Safety obligations.
- Ensure adequate personal knowledge and understanding of Health and Safety matters and arrange training where required.
- Ensure suitable disciplinary measures are conducted on individuals that fail to discharge satisfactorily their responsibilities for Health and Safety.
- Set a personal example when visiting sites by complying with site induction requirements and by wearing appropriate personal protective clothing.
- Business Unit Managers to ensure that senior management Health and Safety inspection are undertaken each calendar month.
- Ensure individual responsibilities stated within the Health and Safety Management System are implemented.
- Ensure suitable processes are in place to induct new employees into the business unit and department.
- Business Unit Managers to ensure regular meetings with Health, Safety and Environmental Advisor to discuss business unit accident prevention, performance, possible improvement areas.
- Business Unit Managers to formally report on a monthly basis to Directors on Health and Safety performance appertaining to the business unit under their control.
- Report to their Director on Health and Safety matters that need the input or support outside their capability.

Contracts Managers and Line Managers:
Reporting to the Business Unit Managers and Departmental Heads, Contracts Managers and Line Managers respectively are responsible and accountable for the standard of Health and Safety for the staff under their control and the implementation of policies and procedures to assist them to discharge their responsibilities.

Responsibilities include:
- Ensure staff under their control has received adequate Health and Safety training to enable them to fulfill their responsibilities in line with the requirements of this Policy and the Safety element of the Integrated Management System.
- Ensure sufficient resources are available to allow the business to fulfill its statutory Health and Safety obligations.
- Report to Business Unit Managers and Departmental Heads any Health and Safety matters that cannot be resolved.
- Responsible for monitoring the implementation of agreed control measures within areas of supervision and control, to ensure the Health and Safety of all staff, contractors, visitors and members of the public and others.

Health & Safety Manager
Reporting to the Technical Services Director, the Health and Safety Manager is responsible for ensuring the provision of necessary Health and Safety advice, assistance and support to all areas of the Business and managing the Health and Safety element of the Integrated Management System to ensure it fulfills statutory Health and Safety obligations and is continually reviewed and updated accordingly.

All employees will be required to:
- Co-operate with managers on Health and Safety matters.
- Not interfere with anything provided to safeguard their Health and Safety and that of others.
- Take reasonable care of their own Health and Safety and that of others.
- Correctly use work items provided by Barhae, including personal protective equipment, in accordance with training and instructions. Report all Health and Safety concerns to an appropriate person.
- Seek further advice where uncertain from line managers from a member of the Health & Safety (Department).
- Ensure that Health and Safety issues are properly considered for persons under their direct control.
- Make their contribution to help reduce accidents and ill health as an integral part of the wider business processes.

Arrangements:

Planning:
Al-Taief Engineering L.L.C. acknowledges that effective management of Health and Safety requires continuous planning as part of ongoing business activities. Any new activities will require specific planning for Health and Safety. Such planning includes identifying potential risks and developing controls that eliminate, reduce isolate those risks and preferably in that order. The Health & Safety department provide advice at the planning stages to assist Contract & Operational Management.
Implementation:
All staff have responsibilities for the implementation of the Health and Safety arrangements and the specific procedures relating to the people and processes under their control. Health and Safety procedures must be clear, well designed, take into account existing business practices and make allowance for human capabilities and fallibilities. They must be documented, communicated and understood by all concerned. Above all, no employee should be left in any doubt as to the importance of following agreed systems and procedures.

Al-Taief Engineering Health and Safety Policy states its commitment to Health and Safety. Therefore, Health and Safety issues will be treated as a matter of priority throughout Al-Taief Engineering. This applies particularly to unsatisfactory conditions or behavior, where the first response will be to take immediate and direct action to remove or control the risks.

Control:
Al-Taief Engineering will ensure that an appropriate degree of control is exerted over all workplaces through the provision of competent line management who understand their responsibilities and the use of Health and Safety procedures, risk assessments and method statements as applicable. Supervision levels will be determined according to the level of risk involved in their activities, and the competence of those undertaking the task and be agreed prior to the commencement of operations and be subject to continuous review.

Co-operation:
Al-Taief Engineering considers co-operation between individuals, safety representatives, managers, employees and all interested parties essential to combating risks to Health and Safety. Al-Taief Engineering will therefore promote co-operation in order to generate the added benefits that arise from the involvement of all and the pooling of knowledge and experience. There are Company procedures setting out how consultation processes are implemented across Al-Taief Engineering LLC.

Al-Taief Engineering methods include:
- Monthly Corporate Operative Health and Safety Committee meetings (long period projects/jobs).
- Local monthly 3 pillar meetings held on site and conducted by Site Management involving site staff and site operatives.
- Weekly toolbox talks with all site staff and site operatives.
- Promotion of an “open door” policy for all employees.
- Daily breakfast briefings undertaken by Site Gangers with Site Operatives before commencement of work activities.
- Operative involvement during preparation of risk assessments and method statements for operational work activities.
- Operative involvement with health and safety management system updates and reviews.
- Safety Coach involvement with front-line workforce.
- Be Safe Observations and discussions.

Risk Control:
The Management of Health and Safety at Work Regulations require employers to assess the risks to Health and Safety of employees and others who might be affected by their undertaking. The assessment of risk is a process that identifies hazards and details the control measures to be adopted. The risk assessment process will start at the earliest possible stage of the project or task and continue during the works, focusing on successively smaller elements of work and work interfaces.

Corporate Health and Safety Risks are loaded on the Business Management System and are reviewed on an annual basis or when new risks are identified by the business. Site Management using standard corporate risk assessments is required to review them and make them site-specific which identify and control Health and Safety risks arising from business activities.

The management structure and responsibilities detailed within the specific construction phase health and safety plans will ensure the effective management of the risk control process at all Al-Taief Engineering LLC workplaces ensuring the Health, Safety and welfare of all persons (including Al-Taief Engineering LLC’s direct employees, sub-contractors, occupiers and members of the public).

Safe Systems of Work:
Combined Risk Assessments and method statements (RA/MS) will be produced for all high risk activities and approved by the responsible Contracts Manager. RA/MS are developed in conjunction with workforce involvement for all activities considered to be either high risk or for any other operations where the control measures are not immediately obvious from standard procedures.
Risk Assessments / Method statements will:
- Address specific tasks or jobs, which may mean breaking down a works package into its constituent elements.
- Be written for the benefit of those doing the work and those supervising.
- Address all aspects of the job-programme, method, sequence, engineering, interfaces etc.
- Include the identified hazards and respective control measures.
- Be clear and concise using simple sketches where appropriate.
- Make reference to the competence of individuals carrying out and supervising the work.

Competence and Training:
Al-Taief Engineering will ensure that employees possess the appropriate level of competence dependent on role throughout its organization. This will be achieved through a combination of appropriate recruitment, training, selection and development of individuals, backed by advisory support. Managers at all levels are responsible for assessing and meeting the training needs of their staff. The Al-Taief Engineering in-house Training Department, Human Resource and Health and Safety Department will advise and assist managers in carrying out these tasks and in compiling formal Health and Safety training programs.
The Training Department will ensure Health and Safety training records for all employees are maintained and made available to Site Management for individual’s competency confirmation before allocating work activities. Staff responsible for employing subcontractors to carry out work, will ensure that only those companies who have been assessed as having the appropriate competencies, including Health and Safety, are engaged to carry out work on behalf of Al-Taief Engineering as part of the vendor assessment process. This applies to subcontractors, designers, consultants and any other specialists. Details of the assessment and approval procedures will be included on the business management system. Managers, will seek to ensure that all persons working are sufficiently competent to carry out their particular duties and tasks safely. Appropriate training standards and registration schemes will be specified by the in-house training department.

Occupational Health:
Occupational Health relates to the effects that the working environment may have on the health of an employee. It also takes account of the influence that an employee’s health may have on their ability to carry out their work. Al-Taief Engineering recognizes the benefits of good health and will endeavor to promote and maintain the highest degree of physical, mental and social well being of its employees. Endeavor will provide an Occupational Health Service to its employees through the employment of a leading Occupational Health provider with a proven track record of delivering high quality Occupational Health Solutions across all industry sectors.

The Occupational Health Provider will assist endeavor to:
- Ensure Staff are fit for task and are not being adversely affected by their work.
- Ensure compliance with workplace health related legislation.
- Work with Al-Taief Engineering to help reduce sickness absence and maintain low levels in line with Corporate Targets.
- Offer pragmatic and business focused solutions to support Line Managers in managing ill health in the workplace.
- Identify Occupational Health needs, providing professional support to ensure legal compliance and best practice for managing employees exposed to risk.
- Provide access to wider in house expertise such as Occupational Hygienists.
- Implement robust management systems and processes to ensure Al-Taief Engineering meet their Occupational health related legal obligations.
- Gather, analyze and implement recommendations from management information arising from the Occupational health programme, other service providers and Al-Taief Engineering.
- Provide suitable health promotion activities designed to tackle identified health issues and trends.

High Level Health & Safety Targets:
- Maintain rolling Accident Frequency Rate of 0.05, with target of zero.
- Maintain British Safety Council 5-star Audit accreditation.
- Introduce 2 year health surveillance programme and reduce days lost due to illness by 20%.

All the Al-Taief Engineering Regional Business Units are monitored on a monthly basis on their performance against the corporate Health & Safety measures. These are reported and reviewed by the Board of Directors, on a monthly basis, to ensure that Health & Safety performance is regularly reviewed with the primary emphasis on continuous improvement.
Monitoring:
A variety of monitoring techniques are used within ATE to measure Health and Safety performance.

3 Pillar Senior Management Inspections:
- All Senior Managers are tasked with completing 3 Pillar Senior Managers inspections on a monthly basis in areas of the business under their control. The term Senior Manager includes the role of Directors, Business Unit Managers, Contracts Managers and Departmental Heads.
- Inspections will be carried out on site and numbers of inspections completed are corporately monitored on a monthly basis as part of the corporate Health and Safety measures set by the Business.
- The Health & Safety element of the inspections is linked to the corporate Health and Safety cardinal rules which are as follows:

**Al-Taief Engineering HSE Cardinal Rules:**

The HSE Cardinal Rules outlined below are mandatory on all Al-Taief Engineering sites, at all operational depots and all company offices. Each Cardinal Rule is supplemented by a series of specific requirements. (PL605) The local HS&E Advisor can also provide further help and guidance. The company also operates a set of Commercial Cardinal Rules which are also mandatory, and should be read in conjunction with this policy.

1. **Accidents and incidents**
   All accidents and incidents, however minor will be reported immediately to allow for prompt investigation and review so that we can learn lessons and prevent re-occurrence.

2. **People**
   All Al-Taief Engineering people and our subcontractors will be correctly inducted, briefed, supervised and competent to undertake their task. All activities will be overseen by a Al-Taief Engineering supervisor.

3. **Pre-planning & Site Set-up**
   All projects will be properly pre-planned before work activities start, using a mobilization plan.

4. **Lifting Operations**
   All lifting operations shall be planned, supervised and conducted by competent persons.

5. **Plant & Equipment**
   All Plant and equipment will be properly selected, used, supervised and maintained in accordance with the Al-Taief Engineering High Risk Plant List. Defective plant and equipment will be reported and taken out of use immediately.

6. **Electricity**
   All electrical installations will be designed and installed by competent people with associated testing and inspection regimes maintained and documented.

7. **Excavations**
   Excavations shall be appropriately supported (or battered) where required, inspected as necessary and will include suitable edge protection.

8. **PPE**
   Safety boots, hard hats, hi-visibility tops and gloves will be worn at all times on all Al-Taief Engineering sites. Appropriate additional PPE will be worn as deemed necessary following task specific risk assessment or where local client PPE rules apply.

9. **Working at Height**
   Work at height will be properly planned and organized with appropriate control measures in place adopting the hierarchy of control i.e. avoiding work at height, use of work equipment, minimizing the distance of the fall or as a last resort providing personal fall protection equipment.

10. **Waste**
    Waste will be managed in accordance with the waste hierarchy – reduce, re-use, re-cycle etc. and Duty of Care and other relevant legislation. All waste is to be segregated and carriers will be engaged in accordance with Al-Taief Engineering supply chain controls and will be appropriately registered to handle our waste.
11. Fuel and chemicals
All fuel and chemicals shall be stored in accordance with current legislation. Appropriate spill control equipment must be available at all times.

12. Water
Water and effluent shall be managed to avoid unauthorized or uncontrolled abstraction and discharge.

Health, Safety & Environment Department Detailed Inspections
All operational sites will be inspected frequently by a Health, Safety and Environmental Advisor to determine site compliance with Health, Safety and Environmental Management systems requirements and the general level of performance on site. All inspections are scored and logged and reported to the Board on a monthly basis. Any inspection scores falling below a threshold of 65% will require attendance by the relevant Contractors Manager and Site Agent to an Executive Team Meeting held on a weekly basis, in order to explain the findings of the inspection and determine action taken to rectify the situation. All non-conformances which highlight urgent actions or cardinal rule failings (including repeats) require formal closure. It is a Health and Safety Management System requirement that all Site Managers conduct a weekly Health and Safety inspection on their own site and record their findings accordingly. Close-out of findings will be checked during the Health, Safety and Environmental Advisor detailed inspection as above.

Accident Reporting
The reporting of accidents resulting in injury or ill health, dangerous occurrences and near misses will be carried out in accordance with Company procedures. Accident statistics will be collated and recorded on a monthly basis by the Health & Safety Department both regionally and corporately and reported to the Technical Services Director on a monthly basis.

Driving at Work Policy
Company guidance is incorporated in employee HSE handbooks and Driver Safety Programme and guidance on the use of mobile phones and other devices in vehicles. Phones (and other communication devices) must only be operated by the driver of a moving vehicle where hands free equipment is provided. Al-Taief Engineering expect each individual to comply with the legal requirements, but also to act in a responsible manner and ensure that when making and answering calls they only do so if it is safe and legal. Accordingly in the interests of safety the use of hand held devices when driving should be avoided and no driver is under any obligation to receive or make a call whilst driving.

Al-Taief Engineering People are encouraged when connecting to mobile phones to enquire whether the individual is able to receive the call safely and if this is not the case, arrange to speak to the person when they are in a safe position to take the call. All mobile phones provided for company use have an answer phone facility so that a message can be taken without the need to answer the call.

Drugs and Alcohol Policy
Company drugs and alcohol guidance will be available on the business management system and provides more comprehensive information related to this matter. A separate drugs and alcohol policy (PL.802) is also available on the business management system. Al-Taief Engineering will take all reasonable steps to ensure that all employees and contractors are regularly briefed and made aware as to the contents of the drugs and alcohol policy statement, together with supporting guidance on drugs and alcohol screening regime and line management responsibilities.
OUR CLIENTS

- EMAAR
- Etisalat Facilities Management L.L.C.
- GGICO
- ADNOC
- Emirates Identity Authority
- Tabreed
- EMRILL
- Port of Fujairah
- Hilton Hotels & Resorts
- NICO International
- Fujairah National Construction & Transport Co.
# Commercial License

**License Details**

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**License Activities**

- Building Contracting
- Concrete Restoration
- Insulation Contracting

**Address**

- P.O. Box: 47890
- Parcel ID: 231-219
- Building No. 1506, Al Rashid St., Deira, Dubai
- Telephone: 971-4-2589555
- Fax: 971-4-2589333
- Mobile No: 971-50-786546

**Remarks**

- ملاحظات / Remarks: (لا يوجد ملاحظات)

**Print Date**

11/01/2017

**Receipt No.**

12493094

(Approved electronic document issued without signature by the Department of Economic Development. To verify the license kindly visit [http://www.dubaided.govae](http://www.dubaided.govae))
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**Remarks**

This certificate shall be invalid incase of any alteration without chamber’s authorization

For online verification of this Certificate, please visit our website http://www.dubaichamber.ae/verify