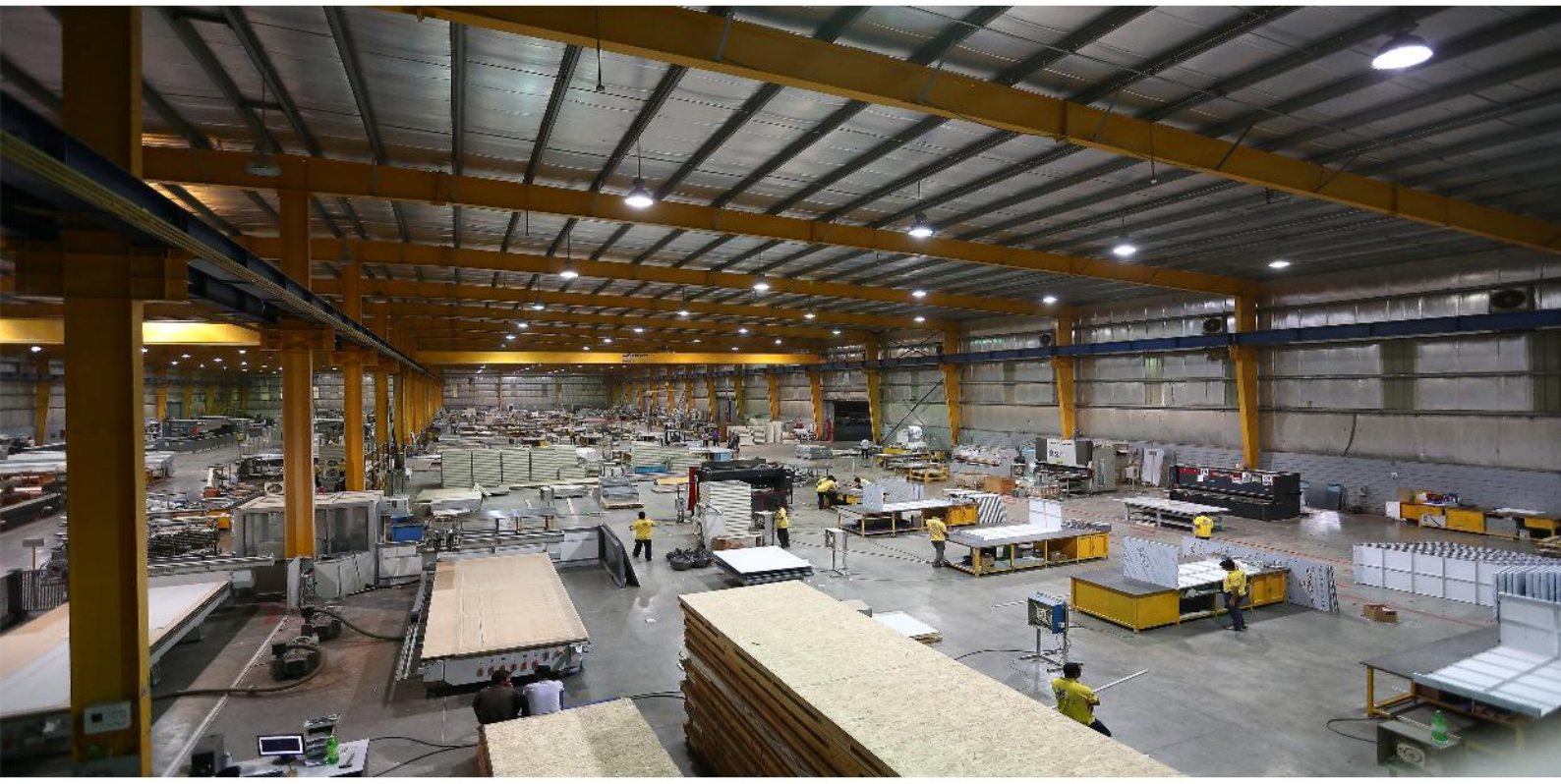
UNITED ARAB ALUMINUM COMPANY




uaac
Legend
Feature 1
Feature 2
United Arab Aluminum Company
STEEL FACTORY
ALUMINUM FACTORY
United Arab Aluminum Company
UCW FACTORY
PVDF, POWDER
COATING FACTORY
GLASS FACTORY
Google Earth
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Table of Contents

Introduction

UAAC is an ISO 9001:2008 certified company and a “Specialized Facade” contractor in KSA with vast experience in building envelope design, manufacture and installation. It is one of the biggest aluminum companies in the kingdom and is a wholly owned subsidiary of CPC (Construction Product Holding Company). The company specializes in the fabrication of aluminum curtain wall and glass systems for building projects, with all the products meeting top international standards.

The very quick success of UAAC has experienced mainly due to its commitment to excellence, quality and best customer service. UAAC offers high-grade products and using wealth of knowledge from highly qualified engineers and well skilled workers and professionals. UAAC not only take pride in the Quality of their Products but in the ability to respond quickly to customer requirements and to meet the demands of the competitive market.

With extensive experience in the building industry, UAAC is one of the Middle East leaders in the development, commercialization and distribution of high quality aluminum systems for windows, doors, sliding elements, curtain walls, conservatories and sun screening systems. UAAC systems provide solutions for residential, palaces and commercial projects including high rise Buildings. Our research approach allows us to regularly extend our product range by offering solutions that are suitable for local markets together with our strategic First Class Quality Aluminum Profile System Provider. UAAC also provides bespoke solutions for architects and consultants requiring non-standard system and profiles (Tailor Made). We are among the leading manufacturers of Aluminum and Glass specializing in all kinds of Aluminum works (Cladding, Curtain Walls, Skylights, Screens, Louvers, Doors and Windows) with a capacity of production that reached 500,000 m^2.

UAAC aim is also to develop innovative and sustainable aluminum solutions that increase the architectural value and enhance the living and working environment of buildings.

The United Arab Aluminum Company (UAAC) facility includes:

a. Aluminum Factory
b. Glass Factory
c. Powder Coating / PVDF Factory
d. Steel (Bracket and Frames) Factory
e. Unitized Curtain Wall Factory (under construction)

Aluminum Solutions

Aluminum is the material of choice for building envelope:

- ✓ Material of choice for architects
- ✓ Allow freedom of creativity
- ✓ Unlimited design and color options
- ✓ Sustainable
- ✓ Environmentally friendly and easily recyclable

- ✓ Low maintenance
- ✓ Cost effective

Product Variety:

1. *Stick System Curtain Wall*

These walls comprise a framework of mullions and transoms arranged to hold glazing units and opaque panels. The framing members have glazing rebates in which the infill panels are retained. In the directory the term is used to describe walls of uniform and regular construction supported from the edge of the buildings floor slabs or edge beam. Previous projects of UAAC such as Princess Noura University and King Saud University are typical example of this type.

2. *Unitized Curtain Wall*

Unitized systems are typically custom designed. There is a wide range of system on the market from the manufacturers that provide varying levels of reliability. Unitized systems range in performance ability from industry to high performance walls. It is thus recommended that projects specifying unitized curtain wall system incorporate a team member who has a breath of experience in designing and working with unitized systems.

UAAC has a track record based on experienced in dealing and installing unitized curtain wall.

3. *Structural Glazing*

In these walls the glass is attached by bolted connections rather than a glazing rebate. The glass may be attached directly to a structural support frame, for instance a stick system. Alternatively, the glass may be suspended from the structure, frequently the roof, or from other glass panels.

4. *Structural Silicon Glazing*

In glazing systems where the glass is attached by silicon bonding on two or four edges the correct use of silicon is critical to the success of the project. Such contracts require specialized skills and the silicon supplier is often involved at the design stage. When structural silicon glazing is to be sub contracted by the faced contractor, the sub-contractor should be identified and be able to demonstrate suitable experience and technical support.

5. *Slope Glazing*

Slope glazing is defined as all glazing that slopes more than 15 degrees from the vertical. Although it comprises a supporting framework of glazing bars it is different from stick system curtain walling.

6. *Rain screen*

Rain screen comprises panels supported from a framework placed in front of an inner wall. The inner wall may be an existing or new block work or concrete wall. Alternatively, the inner wall may be integral with the Rain screen panels and frame. In the latter case the design and construction are more complex and the experience of the contractor such as UAAC is an important consideration in making an appointment.

7. *Commercial Windows*

This term is used to describe windows installed into commercial buildings. The windows may be essentially domestic grade windows but the contract terms and management skills required of the specialist contractor will be different from those for the installation of windows into a private dwelling.

8. Commercial Doors

This term is used in the same sense as the description of commercial windows above.

9. Shop Fronts

Shop fronts are very different from glazed curtain walls or large windows. The profiles to be used are larger than those for windows yet the performance requirements are less onerous than those for curtain walls. Glass handling and glazing become an issue and shop fronts require particular experience of shop doors.

10. Industrial Cladding

This very broad term has been used in the directory to describe all forms of cladding that are predominantly opaque and comprise metal or similar panels.

With a production capacity of more than one thousand square meters per day, UAAC is capable of producing, delivering and installing a full range of products covering all architectural building requirements, for small to mega-projects. All of our products conform to all required international regulation categories.

Quality Control

UAAC production Quality Policy:

The management and staff of UAAC are committed to consistently meeting or exceeding our client's requirements, by supplying the highest quality products and services which are promptly delivered as cost effective, consistent and conformed with a special customer's specifications, as well as all regulatory requirements.

In order to maintain this, we employ a policy of continuous development, both through on-going training of the company's manpower, and the application of the most advanced aluminum industrial technology. We are fully committed to providing adequate resources for achieving our quality objectives and have a policy of ongoing investment, in order to stay ahead of the field.

The regulatory and the mandatory requirements within the company's production quality policy are in line with our QMS: ISO 9001:2008, ISO 14001:2004 and OHSAS 18001: 2007. These can be summarized as follows:

❖ The Aluminum Factory

UAAC aluminum factory was built in the year 2006 with a total area of 9375 sq. mtrs. The factory manufactures and fabricates a wide range of both standardized and custom designed aluminum products to suit building envelop requirements. It has a fully-fledged facility with the latest machinery, worked by dedicated professional work force of highly skilled laborers, supervisors, foremen and machine operators.

❖ The Glass Factory:

The United Arab Glass factory buys their requirement for float glass from various sources in Middle East, Asia, United States and Europe. All units produced can consists a variety of glass types (solar control high performance Low E Glass, tinted glass, reflective or toughened) depending on their application.

- Single Glazing
- Single glazed with tinted glass
- Double Glazing
- Laminated
- Tempered Laminated
- Double Laminated
- Spandrel Glass
- Translucent Glass
- Silk Screened Glass
- Bullet Proof Glass

Glass Factory Machines limitation

Machine Type	Capacity SQM. / 8 hours	Limitation	
		Minimum size (mm.)	Maximum size (mm.)
Old Machinary :			
Cutting M/c	700	300 x 300	6000 x 3210
Grinding M/c	1600	300 x 300	3500 x 2700
Tempering	500	300 x 300	4000 x 2440
Double Glass (Lisec)	200	300 x 300	3200 x 2400
Lamination M/c	200	300 x 300	4500 x 2500
Sand Blasting M/c	150	300 x 300	4000 x 2000
Polishing M/c	150	300 x 300	4000 x 2000
Driling M/c	50	300 x 300	2000 x 2000
New Machinary :			
Cutting M/c	1200	300 x 300	6000 x 3000
Grinding M/c	1800	300 x 300	6000 x 3300
Tempering M/c	700	300 x 300	6000 x 2800
Double Glass (Bystronic)	400	300 x 300	5000 x 2700
Lamination M/c	300	300 x 650	6000 x 3210
Screen Printing M/c	200	300 x 300	6000 x 3000
Heat Sock M/c *(TMB)*	300	300 x 300	8000 x 3000
Heat Sock M/c *(BLOKKLIN)*	300	300 x 300	8000 x 3000
CNC Processing M/c	100	300 x 300	4500 x 2500

Float glass storage section prior to cut to required dimension.

Lisec CNC Glass cutter-automated cutting system for float glass.

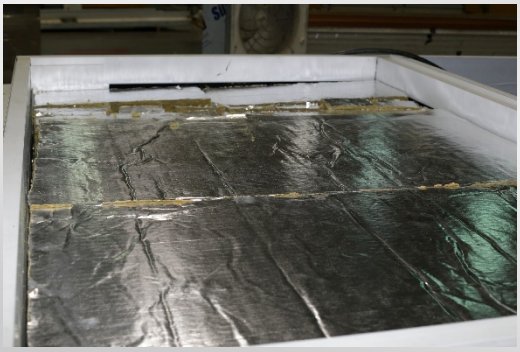
Glass tempering and quench section.

Lamination section

Unitized Panels Assembly

Aluminum clips are to be attached for the fastening of the aluminum back pan.

Rock wool are to be distributed without any gap within.



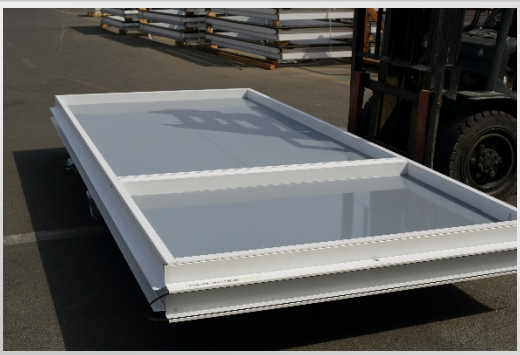
Correct installation and distribution of rock wool to the spandrel area.

Powder coated aluminum back pan are to be fixed evenly at the spandrel area of the unitized curtain wall frame

Aluminum back pans has to be ensured that all the edges are sealed and the fixation is correctly leveled, plane and flat. All hairline joint must be aesthetically smooth.

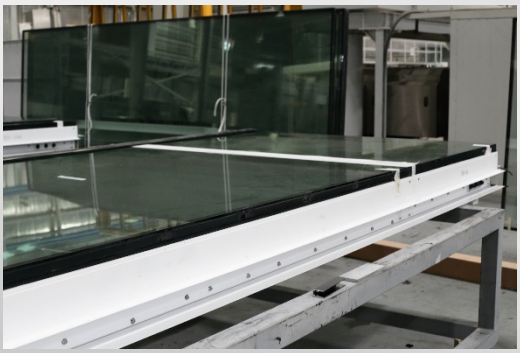
Before sealing the edge gap of the aluminum back pan, a tape has to be applied for assurance of straight application of sealant.

Sealant application must be applied by a skilled workman to ensure the seal of the edges and produce smooth flow of sealant application.

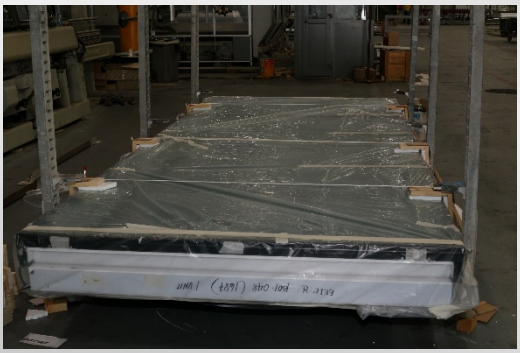


Check all the parts if it is in place and in order: rubber gaskets, bracket types and position, steel insertions, water holes' location and status, flat and leveled back pans and sealant application status.

Completion of glass fixation. IGU glass must be aligned and level to the adjacent glass.



After the sealant has sealed all the edges and secured the glass through structural bonding, let it cured at controlled environment at least 4 hours minimum before making any movement at the frame.



Place the covered frame into the waiting special rack.

Placed the rack by a forklift to the awaiting truck. Make sure that the truck has enough space and capacity for safety before placing the finished product on the platform.

UNITED ARAB ALUMINIUM COMPANY

System Manual

SYS 01

System	**ISO 9001:2015, ISO 14001:2015 And OHSAS 18001**
Issue Number	**1.1**
Issue Date	**01-01-2016**

CN 105

UNITED ARAB ALUMINUM COMPANY

System Manual

Document No.	SYS 01
Issue No.	SYS 01.1
Date	01 January 2016
Applicable Standard	ISO 9001:2015, ISO 14001:2015 And OHSAS 18001:2007*
Total Pages	
Copy No.	
Issued To	

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JEDDAH 21941
http://www.uaac-sa.com/

Works

"Design, Fabrication and Supply of Aluminum and Glazing System."

	Prepared By	Approved By
Name	**Ar. Jebreel Gatbonton**	**Eng. Azzam Al Joudi**
Designation	**Management Representative**	**General Manager**
Signature		

QUALITY, HEALTH, SAFETY AND ENVIRONMENT POLICY

We, at UAAC are committed to high standards of quality, health, safety and environmental practices in our business operations as stated in our strategy.
To achieve this, we commit ourselves to:

1. Satisfy our customers by meeting and exceeding their requirements and expectations by supplying consistent quality products.

2. Implement initiatives to prevent pollution, conserve natural resources and minimize the overall effects of company operations on environment, health and safety.

3. Reduce/eliminate occupational illness, injuries and incidents at the work place.

4. Comply with all applicable laws and regulations and other requirements to which we subscribe.

5. Implement management system conforming to the requirement of ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 and continually improve its effectiveness.

6. Provide adequate resources for implementing and managing QHSE management system effectively.

7. Strengthen awareness, skills and competence of employees and contract's workmen and also foster dialogue with vendors, customers and community.

We shall communicate this policy to all personnel working with or on behalf of the company and to interested parties on demand.

3-2-2016

Eng. Azzam Al Joudi
General Manager

Annexure IV
Issue No. 1.3
01 January 2016

Controlled Copy

(A) Table Of Contents

(B) Authorisation Statement

UNITED ARAB ALUMINUM COMPANY is committed to the establishment and maintenance of Environmental, Quality, Health And safety Management System given in this manual and implemented by the Company to meet the requirements of ISO 9001, ISO 14001 and OHSAS 18001.

The members of the **UNITED ARAB ALUMINUM COMPANY** shall strictly adhere to the various procedures and Work instructions / OCPs / SOPs as supported by the policies outlined in this manual.

Management has been appointed a **Management Representative of Organization**. Management Representative is assisted by a deputy (**Coordinator**) in day to day activities of Quality Management System, Environmental Management System and Occupational Health and Safety Management System for Company. Both QMR and his deputy are authorized to ensure that the ISO 9001, ISO and OHSAS 18001 (QHSEMS) system is established, implemented and maintained by the company. Top management gives full support and cooperation to management Representative for effective implementation.*

2.0 Company Profile

2.1 United Arab Aluminum Company

United Arab Aluminum Company (UAAC) is a limited liability company incorporated in year 2004 as a manufacturer of Aluminum Profiles and accessories and installations of Aluminum Systems as a turnkey projects under the umbrella of Construction Products Holding Company (CPC). CPC provides clients with a “one stop shop” facility for all construction needs.

UAAC’s manufacturing unit is situated in Al Bahra Industrial Area on Jeddah-Makkah high way, P.O.Box:27299, Jeddah: 21941, Kingdom of Saudi Arabia.

UAAC has installed up to date machinery and advanced technology from the leading manufacturers in Aluminum Profile Industry.

The very quick success of **UAAC** has experienced mainly due to its commitment to excellence, quality and best customer service. **UAAC** offers high-grade products and using wealth of knowledge from highly qualified engineers and well skilled workers and professionals. **UAAC** not only take pride in the Quality of their Products but in the ability to respond quickly to customer requirements and to meet the demands of the competitive market.

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The "Mission" of our company in continued business expansion, is striving always to improve upon the Quality of what we do. To this effect "**UAAC** " have embarked upon an Ongoing Business Improvement Program based upon the **standard ISO 9001:2015, ISO 14001:205 & OHSAS 18001:2007*** the corner stone of which are effective strategic Planning, Team Enterprise, Continuous Improvement and Commitment to our customers and our Company.

By this means we are seeking the security and prosperity of all associated with **UAAC**, our customers, suppliers, interested parties, environment and staff alike.*

Keys to success:
We put out entire efforts to meet our delivery schedule. Our keys to success are:
-Best quality customer service.
-Capacity to accomplish large quantity orders.
-Dedicated teamwork.
-Committed to timely supply.
-Shielding environment.

2.2 Scope Of Certificate

The ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007 system has been implemented for; *

"Design, Fabrication and Supply of Aluminum and Glazing System Products for All Interested Parties ." *

2.2 Permissible exclusion for ISO 9001 QMS

None

2.3 Scope of the system manual

This manual is prepared for the purpose of defining the company's interpretations of the ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 international standards, as well as to demonstrate how the company complies with the standard.

This manual does not follow the numbering structure of ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 international standards. Instead, Appendix B presents a cross reference between the sections of this manual and the clauses of ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 international standards.

This manual presents "Notes" which are used to define how UAAC has tailored its management system to suit its purpose. These are intended to clarify implementation approaches and interpretations concepts which are not otherwise clearly defined in ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 international standards. "Notes" appear in italics, with gray background.

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2.5 Determining our strategic direction

UAAC has reviewed and analyze key aspects of itself and its stakeholders to determine the strategic direction of the company. This involves:

- Understanding our core products; services, and scope of management system. (see clause 2.2)
- Identifying “interested parties” (stakeholders) who received our design, fabricate aluminum glazing system products and supply or who may otherwise have a significant interest in our company. These parties are identified in this document.
- Understanding internal and external issues that are of concern to SBG (Saudi Bin Ladin Group) and its interested parties; also identified in this document. Many such issues are identified through an analysis of risks facing either UAAC or interested parties. Such issues are monitored and updated as appropriate, and discussed as part of management reviews.

This information is then used by senior management to determine the company’s strategic direction. This is defined in records of management review, and periodically updated as conditions and situations change.*

3.0 Control and Distribution

3.1 Structure of System Manual

This manual is prepared according to the table of contents. Each chapter begins with page 1 and the numbering continues within the chapter and not throughout the manual. This has been done to facilitate future addition / deletion of pages.

The manual is supported by documented EQHSMS system covering EQHSMS procedures (PRO) and Works instructions / SOPs / OCPs or test procedures. In addition, a separate list of the chapter wise procedures referred in this manual is given in annexure – I and glossary of terms are given in annexure – II.

The manual is issued in loose leaf and is accessible to the staff and customers.

The implementation of this manual and related EHSMS and System procedure is mandatory for all departments. The changes made in this manual are effected through the document control procedures and must be approved by the Management Representative.

3.2 Responsibility

Top Management approves Front / Cover page of the System Manual. The control and maintenance of this manual is the responsibility of Management Representative who is maintaining master list of manual. Also when any changes / amendment is there, then the same page is got approved from the Management Representative before issue of such changed / amended page to the concern copy holder.

3.3 References

- ISO 9001:2015* → Quality Management Systems – Requirements
- ISO 14001:2015* → Environmental Management System – requirements with guidance for use
- OHSAS 18001:2007 → Occupational Health And Safety Management System – specifications with guidance for use
- EHSMS and System Procedures Covering All Procedures Listed In Annexure – I.

3.4 Distribution

System Manuals are distributed to the various departments on a "controlled" basis. Controlled copies are the one, which are subject to incorporation of "revisions". Those in which, the amendment is not reflected / communicated are known as "uncontrolled" copies.

"Controlled" Copies of the System Manual are stamped "Controlled Copy" on the first page only. *

Management Representative maintains Masterlist cum distribution list for issue of System Manual and accordingly copies are distributed with copy number to CopyHolders.

Amendments and revised pages of System manual are issued by Management Representative through a "Change Note" to holders of controlled copies of the manual. Upon receipt of such revisions, the recipient will replace the pages by the revised ones.

"Uncontrolled" Copies may be issued by the Management Representative to the prospective customers and others on the request of the Top Management but the recipient shall not be issued the amendments / revisions.

Management Representative is responsible to fill up amendment sheet in line with any amendment and All the information regarding revisions are distributed to CopyHolders. If any amendment due to change in page number is done then the table of contents is amended accordingly.

3.5 Numbering And Document Control for System Manual

- The number for System Manual is given as SYS *, where * indicates issue number of System Manual for ex. SYS 01 indicates issue no. 1.0 of System Manual.
- System Manual is divided into two sections – section 1 and 2. Section 1 deals with general information and has chapters numbered 1 to 3. Section 2 addresses the EQHSMS System elements of ISO 9001:2015* and reference to ISO 14001:2015* and OHSAS 18001:2007 from chapter 1 to chapter 8 to align clause nos. of ISO 9001:2008. Whenever there is no reference of Clause no., than it is considered as clause no. of ISO 9001.
- A running number identifies each page of chapter (page 1 of 2 on chapter 5 indicates page 1 of chapter 5 that has 2 pages in all). When any revision becomes necessary, it is the affected page that is replaced and not the whole chapter in such case revision is reflected by changing suffix of issue no. And the same is recorded on the amendment record sheet of manual. At presently issue no. is 1.0 and if total manual is revised then issue no. Is changed to issue no. 2.0. For any page-wise amendment issue number of the page is changed to 1.1 for Page wise revision. Total nine amendments are possible in single page of single chapter. If it crosses nine amendments then whole issue of System Manual is changed to next no. i.e. 1.0 becomes 2.0 and so on. All such amendments are recorded in the Amendment Record Sheet given in the paragraph 3.6.

3.6 Amendment Record Sheet

Amd. CN no.*	Chapter / Procedure*	Page no.	Replace current issue no.	New issue no.	New issue date	Reason for change	Signature of copy holder

Note :-

- All the pages other than those listed above are currently in the Issue Number 1.0. If any changes are done then the next issue no. is given by suffix to that page (say for example 1.1) and is recorded on the page listed above.
- To check the validity of the complete manual and procedure*, confirm current issue status of this page with Management Representative and crosscheck with sheets changed.

4.0 Environments, Quality, Health and Safety Management System

4.1 General Requirements (Ref. Clause No. 4.1 of ISO 9001, ISO 14001 and OHSAS 18001)

Company has established, documented, implemented and maintained a Quality Management System, Environmental Management System and Occupational Health and Safety Management System and continually improved it's effectiveness in accordance with the requirements of ISO 9001, ISO 14001 and OHSAS 18001.

a). EQHS Team have determined the critical processes needed for the QMS and HSE and their application throughout the organisation and listed in the process flow Annexure – III as well as in related SOPs.
b). The sequence and interaction of processes is determined and is given in the Annexure–III
c). The criteria and methods needed to ensure effectiveness of operation and control of processes are determined, established and monitored through Quality and HSE objectives.
d). Necessary resources and information are available to support operation and monitoring of the processes.
e). The processes are monitored, measured and analysed.
f). The necessary actions are implemented to achieve planned results and continual improvement of these processes.

All these processes are managed in accordance to requirements of ISO 9001:2015, ISO 14001:2015* and OHSAS 18001:2007.

Clause 8.5 of ISO 9001:2015 and 8.1 of ISO 14001:2015 are applied according to the below paragraph.*

When applicable, outsource processes are applied:

1. Hot Dip Galvanized Coating for Steel Products.
2. Solar Coated Glass Panels.
3. Anodized and PVDF Coating.
4. Non Destructive Report for Welding Works by a Third Party Inspection Agency*
5. Dry Film Thickness Conformance Report for Paint Coating Works by a Independent Testing Laboratory*
6. QMS ISO 9001:2015 Training for Resources Competency by a Third Party QMS Consultancy
7. ISO Certification by a Third Party Agency Certified by UKAS

A Third Party Inspection is required to control and to assure quality requirement in each subcontractor process responsibility. In the absence of a Third Party Inspection, a predefined inspection, pre qualification approval and quality control document must be generated and tendered to UAAC upon the deliverance of the outsourced products like the example of QC documents listed below:

1. Material Test Certificate certified by a Third Party Inspection
2. Certificate of Conformance to the Standards.
3. Warranty Certificate
4. Galvanized or Dry Film Thickness Guaranty Certificate produced by the Supplier.

Also verification of this outsourced product is planned and maintained as per purchase process.

UAAC shall determine and apply criteria for the evaluation, selection, monitoring of performance, and re-evaluation of external providers, based on their ability to provide processes or products and services in accordance with requirements. UAAC shall retain documented information of these activities and necessary actions arising from the evaluations.*

4.2 Documentation Requirements (Ref. Clause No. → 7.5 of ISO 9001, 7.5 of ISO 14001 and 4.4.2 of OHSAS 18001)*

4.2.1 General

The Organization has established System Manual to describe the core elements of Environmental Quality Health and Safety Management System, their interaction and provides direction to related documentation. Also each documents gives information / direction for the next documentation to be followed.

The Environmental Quality Health and Safety Management System document includes;

a). HSE and Quality Policy, objectives and targets,
b). Description of the scope of Environmental Quality Health and Safety Management System,
c). Description of the main elements of the Environmental Quality Health and Safety Management System and their interaction and reference to related documents,
d). Documents, including records as per the requirements of ISO 9001:2015, ISO 14001:2015 and OHSAS 18001:2007,
e). Documents, including records identified as necessary for ensuring effective planning, operation and control of processes related to significant Environmental aspects and OHS Hazards.

The written documents are prepared in Company as per list given below considering the size of organisation, type of activities, the complexity of processes and their interactions and the competence of personnel.

- Documented statement of Quality Policy, HSE Policy and Quality and HSE objectives
- System manual
- HSE and System Procedures
- Work instructions, SOPs, OCPs, Aspects and its impacts, OHS hazards and Risk associated, EHSMP and exhibits to ensure the effective planning, operation and control of its processes
- Records (few records are also maintained in the electronic media).

4.2.2 System Manual

This manual is also known as the System Manual, which outlines the scope, structure and general principles of the operation of Integrated Management System (Quality Management System, Environmental Management System and Occupational Health and Safety Assessment System) and serves as a declaration of the intentions of the Top Management to satisfy various clauses of ISO 9001, ISO 14001, OHSAS 18001. The exclusions of Quality Management System with appropriate justification are documented. Each chapter gives details for ISO 9001, ISO 14001 and OHSAS 18001 requirements,

sequence and interaction of the processes included in the Integrated Management System. Each chapter has cross–reference to the HSE or System Procedures.

4.2.3 Process Approach*

4.2.3.1 Process Identification*

UAAC has adopted a process approach for its management system. By identifying the top level processes within the company, and then managing each of these discretely, this reduces the potential for nonconforming manufactured and supplied aluminum glazing products discovered during final processes or after delivery. Instead, nonconformities and risk are identified in real time, by actions taken within each of the top-level processes.*

Note: Not all activities are considered “processes”- the term “process” in this context indicates the activity has been elevated to a higher level of control and management oversight. The controls indicated herein are applicable only to the top-level processes identified.*

The following top-level processes have been identified for UAAC:*

- Sales and Marketing – Plant Manager PRO/SYS/08*
- Production – Plant Manager PRO/SYS/11*
- Stores – PRO/SYS/12*

Each process may be supported by other activities, such as tasks or sub-process. Monitoring and control of top level processes ensures effective implementation and control of all subordinate tasks or sub-process.

Each level process has a Process Definition Document Title which defines:*

- Applicable inputs and outputs*
- Process owner(s)*
- Applicable responsibilities and authorities*
- Applicable risk and opportunities*
- Critical and supporting resources*
- Criteria and methods employed to ensure the effectiveness of the process*
- Quality objectives related to that process*

The sequence of interaction of these processes is illustrated in ANX-III.*

Note: ANX-III represents the typical sequence of processes, and may be altered depending on customer or regulatory requirements at the job or contract level as needed.

4.2.3.2 Process Controls and Objectives*

Each process has at least one objective established for it; this is a statement of the intent of the process. Each objective is then supported by at least one “metric” or key performance indicator (KPI) which is then measured to determine the process ability to meet the quality objective.*

Note: Some processes have multiple objectives and multiple metrics. This is determined by the nature of the processes, its impact on manufacturing and supplying aluminum glazing products and associated risks.*

Note: Whereas ISO 9001 discusses process measurements and "quality objectives" as separate concepts, CPC (Construction Holdings Company) combines them; quality objectives are used to control the processes. Additional objectives for manufacturing and supplying aluminum glazing products may be assigned, but these will also be used to measure process effectiveness.*

Throughout the year, metrics data is measured and gathered by process owners or other assigned manager, in order to present the data to MR. The data is then analyzed by MR in order that MR may set goals and make adjustments for the purposes of long term continual improvement.*

The specific quality objectives for each process are defined in the **Company Objectives and Cascading Documents.***

Metrics, along with current standings and goals for each objective, are recorded in records of Management Review.*

When a process does not meet goal, or an unexpected problem is encountered with a process, the corrective and preventive action process is implemented, for the identified processes.*

4.2.3.3 Outsourced Processes*

Any process performed by a third party is considered an "outsourced process" and must be controlled, as well. The company's "outsourced process", and the control methods implemented for each, is defined in **Outsourced Processes Document.***

The type and extent of control to be applied to the outsourced process take into consideration:*

a) The potential impact of the outsourced process on the company's capability to provide product that conforms to requirements.*
b) The degree to which the control for the process is shared.*
c) The capability of achieving the necessary control through the purchasing contract requirements.*

4.2.4 Control of Documents

4.2.4.1 General*

The management system documentation includes both documents and records.*

Note: The ISO 9001:2015 standard uses the term “Documented Information” UAAC does not use this term, but instead relies on the terms “Document” and “Record” to avoid confusion. In this context, the terms are defined by UAAC.*

- Document-Written information used to describe how an activity is done.*
- Records-Captured evidence of an activity having been done.*

Documents and records undergo different controls as defined herein.*

The extent of the Management System documentation has been developed based on the following:*

a) The size of UAAC.*
b) Complexity and interaction of the process.*
c) Risks and opportunities.*
d) Competence of personnel.*

All the documents including records relating to the Integrated Management System requirements are controlled as per documented procedure.

a) They are reviewed for adequacy and are approved by authorized persons as per documented procedure.

b) The documents are updated as necessary, reviewed and re–approved by the same authority. Copies of superseded documents are identified and retained as necessary to maintain specified / required traceability.

c) The current revision status of the document is identified by issue number. Also the latest changes are identified by suitable marking. Each document or data will have its revision status by issue number or revised date as applicable. Such changes shall be distributed to authorised CopyHolders of the document. Any revision is affected by changing issue no. of particular page / document as per established procedure.

d) The respective Functional Heads / Management Representative are responsible for ensuring that the latest relevant versions of applicable documents are available at point of use. They will also ensure that documents remain legible, readily identifiable and retrievable.

e) All the controlled documents have been identified, legible and system of preparation, issue, distribution and maintenance of documents have been described in the procedure.

f) Management Representative ensures that all external documents needed for use in IMS are identified and proper control is established. Similar controls are also applied to the external documents necessary for the planning And operation of Integrated

Management System, like standards, customer data and documents of external origin. The external documents are identified and distribution is controlled.

g) Master list cum distribution list with current revision of documents (latest issue number) and distribution list of all the documents is maintained for all the four tiers of documents to prevent unintended use of obsolete documents. If any obsolete documents are kept for future reference then stamp of obsolete document is put on the document. *

h) The MR maintains a Document Master List. The list identifies each issued document by its title, code/number, date of issue, and the current revision level. *

i) Electronic Data: The Documented Quality Management System is held on a designated PC to prevent unauthorized changes to system documentation. The system is used in hard copy form; QMR is the only person who has the softcopy; others can have access to it through company server as pdf format with unprintable authorization. *

4.2.5 Change Management*

When UAAC determines the need for changes to the management system or its processes, these changes will be planned, implemented, and then verified for effectiveness; see the document "**Change Management Doc. Title PRO/SYS/20**"*

Documents are changed in accordance with procedure. (PRO/SYS/14).*

4.2.6 Risk and Opportunities*

Note: UAAC deviates slightly from the approach towards risk and opportunity presented in ISO 9001. Instead, UAAC views" uncertainty" as neutral, but defines "Risk" as a negative effect of uncertainty, and "Opportunity" as a positive effect of uncertainty. UAAC has elected to manage risk and opportunities separately, except where they may overlap. Formal risk management risk management may not be utilized in all instances; instead, the level of risk assessment, analysis, treatment and record keeping will be formed to he level deemed appropriate for each circumstance or application.

UAAC considers risks and opportunities when taking actions within the management system, as well as when implementing or improving the management system; likewise, these are considered relative to products and services.*

Risk and opportunities are managed in accordance with the document "**Risk Management Proc. Title PRO/EHMS/01-B**"

4.2.7 Control of System Records (Ref. Clause No. → 7.5 of ISO 9001:2015, 7.5 of ISO 14001:2015 and OHSAS 18001:2007)

All records, which are generated to provide evidence of conformity to the requirements in various areas, are maintained to demonstrate the effective operation of the Integrated Management System is controlled.

Procedure is established and maintained to define the control needed for identification, storage, protection, retrieval, retention and disposition of records.

The records are kept legible, readily identifiable and retrievable.

Integrated Management System records are stored in such a manner as to ensure safe preservation and easy retrieval and protected against damage, deterioration or loss. The system is applicable for hard copy of records as well as records maintained in electronic media. All the formats used as Records are properly identified and controlled.

Each Functional Heads maintains a list of records including retention time for the records being maintained in his department. Also ensure that records are remains legible, identifiable and retrievable to the activity, product of service involved.

4.2.6 Related Procedure

- PRO/SYS/02 Procedure for document and data control.
- PRO/SYS/03 Procedure for control of records.
- PRO/SYS/14 Change Management
- PRO/EHSMS/01-B Risk Management
- PRO/SYS/08 Customer Related Process
- PRO/SYS/10 Production
- PRO/SYS/12 Stores
- PRO/SYS/17 Procedure for Outsource Processes
- COMPANY OBJECTIVES AND CASCADING DOC.

5.0 Management Responsibility

5.1 Management Leadership and Commitment (Ref. Clause No. → 5.1 of ISO 9001)*

MR of UAAC provides evidence of its leadership and commitment to the development and implementation of the management system and continually improving its effectiveness by:*

a) Taking accountability of the effectiveness of the management system.*

b) Ensuring that the Quality Policy and Quality Objectives are established for the management system and are compatible with strategic direction and the context of the organization.*

c) Ensuring that the quality policy is communicated, understood and applied within the organization; *

d) Ensuring the integration of the management system requirements into the organization's other business processes, as deemed appropriate. (see note);*

e) Promoting awareness of the process approach.*

f) Ensuring that the resources needed for the management system are available;*

g) Communicating the importance of effective quality management and of conforming to the management system requirements.*

h) Ensuring that the management system achieves its intended results.*

i) Engaging, directing and supporting persons to contribute to the effectiveness of the management system.*

j) Promoting continual improvement.*

k) Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibilities.*

Note: "Business Process" such as accounting, employee benefits management and legal activities are out of scope of the QMS.

The Top Management provides evidence of its commitment to the development and implementation of the Integrated Management System for continual improving it's effectiveness as below:

- The importance of meeting customer / interested parties / Occupational Health and Safety as well as regulatory and legal requirement is communicated across the organisation. Such requirements are identified, documented and provided for follow up to the concern Functional Heads.
- The Quality Policy and HSE Policy and Quality and HSE Objectives are established, documented and provided for ready reference to the employee.
- Quality and HSE Objectives are ensured and established.
- **At least once a year management reviews *** are conducted for review of our activities and is attended by Top Management.
- **Company** has identified resource requirements and has provided adequate in house resources in terms of qualified personnel, test equipment and facility for production and testing as well as maintaining environment and occupational health and safety. Top Management is responsible for providing appropriate resources and trained personnel

for effective implementation of the Integrated Management System in their respective areas.

5.2 Customer Focus (Ref. Clause No. → 5.1.2 of ISO 9001)*

MR of UAAC adopts a customer approach which ensures that the customer needs and expectations are determined, converted into requirements and are met with the aim of enhancing customer satisfaction.*

This is accomplished by assuring:

a) Customer and applicable statutory requirements are determined, understood and consistently met. The risk and opportunities that can effect conformity of products and services and the ability to enhance customer satisfaction are determined and addressed.*

b) The focus on enhancing customer satisfaction is maintained.*

Based on routine contract review documents as well as communication and customer survey the customer needs and expectation is determined and documented.

All these data are processed and converted into customer requirements and conveyed to the concern person.

While preparing customer requirements consideration is given for obligations related to product as well as regulatory and legal requirements.

Top Management ensures that customer needs and expectations are determined and customer requirements are fulfilled for enhancing customer satisfaction.

Planning for Identification of Hazard Identification, Risk Assessment And Environmental aspects and its impact (Ref. Clause No. → 4.3.1 of ISO 14001 and OHSAS 18001)

The identification of Environmental aspects and OHS Hazards is an on–going process that determines the past, current and potential impacts and risks of the activities, products and services. Procedure is documented for the Environmental aspects and OHS Hazards identification and impact evaluation and risk assessment. During identification of Environmental aspects and OHS Hazards and impacts and risks all activities operated by the Organization as well as others are taken in to consideration, like;

- Routine and non-routine activities.
- Activities of all persons having access to the workplaces (including contractors and visitor, who are suppose to be affected by the identified work or whose work can affect environment),
- Human behavior, capabilities and other human factors,
- Identified Environmental aspects and OHS Hazards originating outside the workplace capable of adversely affecting the environmental, health and safety under the control of the Organization within the identified work places,
- Environmental aspects and OHS Hazards created in the vicinity of the workplace by work related activities under the control of Organization,
- Infrastructure, equipment and materials provided at work places (Both Company as well as contractors),
- Changes or proposed changes in the Organization, its activities, or related materials,

- Modification made to the Environmental Quality Health and Safety Management System, including the temporary changes made its impact on operations, processes and activities,
- Legal obligation related to the impacts and risks assessment and implementation of necessary / existing controls,
- The design of work areas, processes, installations, machinery / equipment, operating procedures and work organization, including their adaption to human capabilities and environments.

The methodology for Environmental aspects and OHS Hazards and risk assessment is defined as proactive steps for classification of impacts and risks and identifications of objectives and EHSMP. It is consistent with operating experience and the capabilities of risk control measures employed. It provides input into the determinations of facility requirements, identification of training needs and / or development of operational controls. It provides monitoring of required actions to ensure both the effectiveness and timeliness of the implementations. Followings are also taken in to consideration as a methodology;

- Is defined with respect to the scope of the Company and is proactive rather than reactive,
- Gives identification, prioritization and documentation of impacts and risks and applicable controls.

Results of the assessment are kept up to date with the existing controls, proposed controls (objectives and programmes) for reduction of impacts and risks considering the following hierarchy;

- Elimination,
- Substitution,
- Engineering control, signage / warnings and / or administrative controls, and
- Personal protective equipments.

All the above controls are identified and documented in the list of Significant Environmental aspects and OHS Hazards list and is made available to all employees.

A register of Environmental aspects and OHS Hazards and associated impacts and risks have been established on the basis of a review undertaken by the Company with the assistance of an external agency to establish the current position with regard to the Environmental, health and safety using evaluation criteria provided. This information is kept up to date. Also for implementation of the management of change, Environmental aspects and OHS Hazards and impacts and risks associated with the proposed changes are identified and documented.

Also the significant Environmental aspects and OHS Hazards are taken in to account in establishing, implementing and maintaining Environmental Quality Health and Safety Management System.

5.2.1 Legal and other requirements and Compliance Obligation (Ref. Clause No. → 4.3.2* of ISO 14001 and OHSAS 18001)*

Procedure has been established and maintained:

- To identify for having access to the applicable legal and other requirements, to which the organization have related Environmental aspects and OHS Hazards,
- To determine that these requirements applies to its Environmental aspects and OHS Hazards,

Company ensures that applicable legal and other requirements are identified considering the nature of the activities, process and products. All such requirements are implemented and are communicated to the concern amongst the Company.

The information for legal and other requirements is updated as well as communication is done for the relevant information on legal and other requirements to the employees and relevant interested parties. The legal register is kept up to date.

A register of "Occupational, Health and Safety Legislation" has been established and is maintained document.

5.3 QHSE * Policy (Ref. Clause No. → 5.2* of ISO 9001 and 4.2 of ISO 14001 and OHSAS 18001)

QHSE * Policy are laid down and is given in Anx – IV, to this manual, is signed by Top Management and Quality and HSE Objectives are also put up below the Policy. Based on above Objectives, necessary framework is provided for reviewing and establishing the Objectives in **UAAC***. It is communicated and understood within organisation and reviewed for continuing suitability. Further process wise Quantifiable Objectives (Control Parameters) are identified and are recorded in related records. The process wise Process Flow, Input, Output, Inter–linkages etc. are documented in the separate Exhibit Nos. E/SYS/02

5.3.1 Quality Policy and HSE Policy Implementation

All the employees are advised to undergo Quality Policy and HSE Policy training on joining the Company. Implementation of the Integrated Management System and the Quality Policy and HSE Policy on a day to day basis is responsibility of the Management Representative and it is achieved by Ensuring that the respective employees understand the Quality Policy and HSE Policy and comply with the Integrated Management System documents. Also display of the Quality Policy and HSE Policy at prime location is done. The Quality Policy and HSE Policy are reviewed **Once In a Year** for continually improvement of the effectiveness of the Integrated Management System in management review meeting. Proper document control for the Quality Policy and HSE Policy is established as per documented procedure.

5.4 Planning (Ref. Clause No. → 6.0* of ISO 9001 and 4.3 of ISO 14001 and OHSAS 18001)

5.4.1 Quality and HSE Objectives (Ref. Clause No. → 6.2* of ISO 9001 and 4.3.3 of ISO 14001 and OHSAS 18001)

Quantifiable Quality and HSE Objectives are established based on documented Quality Policy and HSE Policy given above at relevant function and consistent with the Quality Policy and HSE Policy and need to meet product and customer requirements. The quantifiable criteria are dynamic and reviewed in management review meeting for our commitment to continual improvement.

5.4.2 Objectives, targets and programme(s) (Ref. Clause No. → 6.2* of ISO 14001 and OHSAS 18001)

HSE Objectives and targets at relevant functions and levels within the Company are prepared, documented and implemented as a performance indicator based on the HSE Policy.

All such objectives are made measurable and are consistent with the HSE Policy including the commitments to prevention of pollution and OHS Hazards, compliance with the applicable legal and other requirements, which are the basis for continual improvement.

Procedure is documented and implemented for setting and reviewing of HSE Objectives. The objectives are established and reviewed based on the Environmental aspects and OHS Hazards and

impacts and risks, technological options, financial, operational and business requirements and the views of interested parties, legislative requirements etc. The objectives are made for relevant function and level within the organization.

For achieving objectives and targets, Environmental health and safety management programme is prepared, implemented and maintained to ensure achievement of defined objectives and targets. The Environmental health and safety management programme is prepared having reference of ;

- Responsibility for achieving objectives and targets at relevant functions and levels of employees / organization,
- Methods / modes and time frame for achieving objectives and targets.

The EHSMP is reviewed at regular intervals in the management review meeting and amended in line with new development, modification and expansion of existing activities.

5.4.2 Integrated Management System Planning

The resources need to achieve the Quality and HSE Objectives are identified, discussed in the management review meeting and planned. The resource planning is documented. Top Management ensures that planning of the EQHSMS is carried out in line with ISO 9001 requirements and Quality and HSE Objectives.

The quality planning includes

A) Processes of the Integrated Management System
B) Resources needed
C) Continual improvement

Planning ensures that changes are conducted in the controlled manner. During the change integrity of Integrated Management System is maintained.

5.5 Responsibility, Authority And Communication (Ref. Clause No. → 5.3* of ISO 9001 and 4.2 of ISO 14001 and OHSAS 18001)

5.5.1 Resources, Roles, Responsibility And Authority (Ref. Clause No. → 5.3* of ISO 9001)

Top Management has provided adequate resources required for establishing, implementing, maintaining and improving the Environmental Quality Health and Safety Management System. The resources like, human resources including specific skill related to the activity performed, organizational infrastructure, technology and financial resources. Top Management commitment is demonstrated by;

- Ensuring the availability of resources essential for establishing, implementing and maintaining and improving the Environmental Quality Health and Safety Management System,
- Defining roles, allocating responsibilities and accountabilities and delegating the authorities to facilitate effectiveness of Environmental Quality Health and Safety Management System.

The organization set up of Company for implementation of the Environmental Quality Health and Safety Management System is shown in the organization chart given at last page of this section.

The chart also brings out reporting relationship. The roles and responsibilities of key personnel are demarcated clearly keeping in view the main activity of each department. The authority on EQHSMS issues is commensurate with their defined responsibility. The roles, responsibilities and authorities of the personnel related to EQHSMS risk of the

organization activities are documented in the Job Descriptions and Specifications and are communicated to the functions concerned.

Common Responsibilities

Common responsibilities of all HODs / Functional Heads in addition to their functional responsibilities are :

- Ensuring that the activities are carried out in safe and recommended methods.
- Implementation and review of the effectiveness of the Environmental Quality Health and Safety Management System.
- To participate in the internal audit of the functions / departments as per the internal audit plan.
- To initiate corrective and preventive actions, in case of any non–compliance with respect to EQHSMS.
- To identify the training needs of respective departments members and coordinate with personnel department in nominating right persons for training.
- To identify, control and maintain EQHSMS records related to departments.
- Implementation of HSE Policy and objectives and EQHSMS Management Plan

Roles and responsibilities at various level of the employees

Sr. No.	Activity	Responsibility
1.	Identification of Environmental aspects, OHS Hazards, impact and risk	Top Management / Management Representative
2.	Monitoring the use of earplugs, EQHSMS issues like, spillages, emission, incidents, and accident rates.	
3.	Carryout necessary inspection and testing of PPEs as per written procedures as well as fulfill legal compliance in their applicable areas.	
4.	Creating awareness among employees	
5.	Arranging for the prevention of leakages as soon as they are detected. Ensuring safe work practices and functioning of safety devices.	Team Member – HSE / Safety Officer
6.	Follow recommended procedures for EQHSMS issues and are brought to the notice of Immediate Boss	Team Member – HSE / Safety Officer
7.	Ensuring contract workmen are committed to environmental aspects and OHS Hazard protection.	Team Member – HSE / Safety Officer
8.	Clearing the used packing materials / waste and disposing as well as maintain housekeeping in their areas.	Tops Management / Functional Heads
9.	To reduce wastes and conserve the resources. Supervise the activities of the subordinates and ensure that handling and storage and process monitoring are done as per the recommended procedures.	Functional Heads

All the activities are carried out on continuous basis and their achievements are reported in the Management Review Meeting.

5.5.2 Management Representative

Note: The ISO 9001:2015 standard does not require the"MR" but UAAC still does assure the importance of his position, relies on its role in controlling and following up the system established and implemented by UAAC.

Top Management has appointed a member of the organization's management as a Management Representative for the company as shown in the Organization structure. Apart from his other duties he has been given the authority for ensuring establishment, effective implementation and maintenance of EQHSMS for the Company as per ISO 9001:2015*, ISO 14001:2004 and OHSAS 18001:2007 requirements and works as EQHSMS MR.

He acts as a member secretary to the Management Review Committee Meetings. He also liaison with external agencies on matters related to the certification of EQHSMS. He also plans the audit and reports the findings to the Management Review Committee. He is responsible for maintaining the records of Management Review Meetings. He will report to the Top Management on the performance of the EQHSMS system for review and improvement of the same in Company. Irrespective of his other responsibilities his roles, responsibilities and authority for;

- Ensuring that the Environmental Quality Health and Safety Management System requirements are established, implemented and maintained in accordance with the ISO 9001:2015*, ISO 14001:2004 and OHSAS 18001:2007.
- Reporting on the performance of the Environmental Quality Health and Safety Management System to the Top Management for review as a basis for improvement of the system including recommendation for improvement.

Management Representative is directly reporting to the Top Management for the matters related to the EQHSMS. The ultimate responsibility for EQHSMS rests with the Management Representative.

Person working at the work places is taking responsibility for environmental aspect and OHS Hazards, on which they have control, including adherence to the Company EQHSMS requirements.

5.5.3 Communication, participation and consultation (Ref. Clause No. 7.4 in ISO 14001 and 4.4.3 OHSAS18001)*

5.5.3.1 Communication

The organization has established procedure for internal and external communication. Internal communications include providing information to various levels and functions in the organization that are responsible for performance regarding the Environmental aspects, OHS Hazards, impact and risk, monitoring, audit and management review. External communications include receiving, documenting and responding to Environmental aspects, OHS Hazards, impact and risk and EQHSMS with interested parties. It also includes

- Internal communication among the various levels and functions of the Organization,
- Communication with the contractors and other visitors to the workplaces,
- Receiving, documenting and responding to relevant communications from eternal interested parties.

5.5.3.2 Participation and consultation

The organization has established procedure for participation and consultation of various Company workers for;

a). Their participation includes;

- Their involvement in Environmental aspect, hazard identification, impact and risk assessment and determination of controls,
- Their involvement in incident investigation,
- Their involvement in development and review of HSE Policies and objectives of the Company
- Their consultation in terms of suggestion for improvement and any changes that affects their EQHSMS,
- Their representation in safety meeting considering the OH&S matters.

All workers are informed for their participation arrangement in Environmental Health and Safety Management System by providing suggestion in the suggestion box, active participation in the safety meetings and incident investigation including their representative called **Employee Representative.**

b). Consultation is also done with the contract workers, when there is change, which affects their EQHSMS.

Company also consults relevant external interested parties about pertinent EQHSMS matters like, periodic testing of lifting tools, tackles, pressure receivers / vessels, work environment monitoring, Process stack emission, waste water testing, ambient air analysis etc.

5.6 Management Review (Ref. Clause No. → 9.3* of ISO 9001 and 4.6 of ISO 14001 and OHSAS 18001)

5.6.1 The Integrated Management System established in the **Company** is systematically reviewed for its continuous suitability and effectiveness in confirming the requirements of ISO 9001, ISO 14001 and OHSAS 18001. The review includes implementation of our Quality Policy and HSE Policy and Objectives to identify any areas, which require improvement and evaluate need for changes for effective functioning of the system.

This review is carried out at least **once a year by Top Management** or their nominee by holding Management Review Meetings, which are attended by Management Representative and all Functional Heads. It is the responsibility of the Management Representative to prepare the agenda and minutes of management review meeting covering with the

- Discussion held,
- Action planned,
- Target date of completion for planned actions.
- Person responsible to complete planned actions.

5.6.2 Review Input

Input to management review includes current performance and improvement opportunities related to the items listed here under.

1. Review of action decided in the previous meeting.
2. Review the extent to which QHSE Objectives have been met (System Effectiveness)*
3. Review results of internal / external audit.
4. Changes in external and internal issues that are relevant to the QHSEMS.*
5. Review of customers satisfaction and feedback from relevant interested parties including complaints / feedback reports / need and expectation / compliance obligations / results of participation and consultation.*
6. Review QHSE process performance and product conformities.*
7. Evaluation and changes and changes of compliance with applicable legal and other requirements (obligation)*
8. Review of the performance of external providers*

9. Review of the adequacy of resorces.*
10. Review of the effectiveness of actions taken to address risks and opportunities.
11. Review status of incident investigations, corrective actions and preventive actions.*
12. Review changes in environment significant aspect.*
13. Review status of QHSE non conformities and corrective action.*
14. Review of the recommendation for opportunities of improvement.*
15. Review of the QHSE Policy for adequacy and to ensure it remains consistent with the needs of customers and theindustry.*

5.6.3 Review Output

Based on management review process actions emerged for any of the items related to:

1. Actions for improvement in the Quality, Environment and Occupational Health and Safety System and its process,
2. Actions for improvement in the product related to customer requirements,
3. Requirements for resources, including training needs

5.6.3 The above output is recorded in the MRM as Actions Planned with the following details;

- Action Planned,
- Person responsible for the action
- Target date of completion.

5.6.4 Reference

- Internal / external audit reports.
- Records for Quality and HSE objectives results.
- Minutes of previous management review meetings.
- Records of non–conformance, corrective and preventive actions.
- Records of customer or interested parties feedback and / or complaints.
- Training records.
- ISO 9001, Quality System – Requirements
- ISO 14001, Environmental Management System – Requirements
- OHSAS 18001, Occupational Health And Safety Assessment System – Requirements

5.6.5 Formats:

- F/SYS/17 Management Review Meetings
- F/SYS/21 Action Plan

5.6.5 Formats:

PRO/SYS/01-Procedure for management review.
PRO/EHSMS/01-A – Aspect & Impacts Identification
PRO/EHSMS/01-B – Hazard Identification & Risk Control
PRO/EHSMS/02-Procedure for legal and other requirements.
PRO/EHSMS/03-Procedure for consultation and communication.

6.0 Resource Management

6.1 Provision Of Resource (Ref. Clause No. → 7.1* of ISO 9001, 4.4.1 of ISO 14001 and OHSAS 18001)

Company has identified resource requirements and has provided timely resources in terms of qualified personnel, test equipment and facility for production and testing. The resources are provided

a). For implementation and maintenance of Integrated Management System and continually improving its effectiveness, and

b). For enhancing customer satisfaction by meeting customer requirements.

Adequacies of these resources are reviewed, for example during

- Management review
- Contract review
- Significant environmental aspects,
- Legal compliance review
- Internal audit results
- Customer / interested parties complaint review

6.2 Human Resource

6.2.1 General

Personnel performing work affecting conformity to product requirement are suitably trained and / or experienced. Their work competence is checked based on applicable education, training, skills and experience.

6.2.2 Competence, Awareness And Training (Ref. Clause No. → 7.2* of ISO 9001, 4.4.2 of ISO 14001 and OHSAS 18001)

The organisation has established a procedure for training needs assessment and for providing appropriate training to specified needs. All personnel whose work affecting the conformity of product requirement and environment are made competent based on performance review and on the job training for their staff for upgrading their knowledge and achieved the necessary Competency. Also during routine work due to change in area of work or any other reason the training needs are identified and provided. Functional Heads ensures that employees are aware of the relevance and importance of their activities and how they contribute to the achievement of the quality and environmental objectives. Also ensure that the necessary competence has been achieved.

Suitable integrated management system awareness programmes are arranged for all the employees of the company to ensure that the requirements are well understood at all level.

In training procedure, considerations are taken for satisfying the needs of the organisation, environmental aspects and its Impacts, responsibility, ability and literacy as well as risk. Necessary training programs on quality matters and environmental issues are planned and implemented. The training procedure and process approach incorporates:

a). Determining necessary competence for personnel performing work affecting conformity to product requirements,

b). Providing training or other actions to achieve necessary competence,

c). Evaluating the effectiveness of actions taken,

d). Ensuring that the personnel are aware of the relevance and importance of their activities and their contribution to achievement of the quality and environmental objectives,

e). Maintain appropriate records of education, training, skills and experience

f). The importance of conformance with Environmental Policy, Quality Policy and procedures and with the requirements of Integrated Management Systems

g). The significant environmental aspects and related actual or potential impact with their work and the environmental benefits of improved personal performance

h). Their roles and responsibilities in achieving conformance with the policy, procedures and with requirements of Integrated Management System including emergency preparedness and response for achieving conformity

i). The potential consequences of departure from specified operating procedures

j). The procedure also includes the levels of responsibility, ability and literacy of employee including risk involved

k). Evaluation of the effectiveness of the actions taken based on the training

l). Maintain appropriate records of education, training, skills and experience.*

6.3 Infrastructure

Appropriate facilities are identified, provided and maintained to achieve conformity of product requirements. Infrastructure includes;

a). Building, workspace and associated utilities,

b). Process equipment (both hardware and software), and

c). Supporting services (such as transport, communication or information system)

Similarly proper care is taken to ensure and maintain good environmental by creating green belt in and around the Company as well as by providing adequate PPEs to ensure safety in the plant during routine operation.

6.4 Work Environment

Appropriate work environment is identified to achieve conformity of product and provided considering human and physical factors. This also considers the environmental performance and safety related issues. The work environment factors such as noise, temperature, humidity, lighting, weather etc. are controlled and maintained.

6.5 Related Procedure

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- PRO/SYS/05 Procedure for training

7.0 Product Realization

7.1 Planning Of Product Realization (Ref. Clause No. → 8.1* of ISO 9001)

Planning for sequence of processes and sub processes is consistent with the EQHSMS requirements of Company and documented in the Quality Plan / Process Approach / SOPs / OCPs / Work Instruction documents. The process flow chart of Company is given in annexure → III of this manual.

In planning process for realization of product, Company has determined the following, as appropriate.

a). Quality and HSE objectives and requirements for the product
b). Need to establish documents and process and provide resources specific to the product.
c). Required verification, validation, monitoring, measurements, inspection and test activities specific to the product and the criteria for product acceptance.
d). The records those are necessary to provide confidence of conformity of the processes and resulting product to fulfill requirements.

Operational control (Ref. Clause No. → 8.1* of ISO 14001 and 4.4.6* OHSAS 18001)

The organization has established operational control procedures for operations and activities that are associated with the identified significant Environmental aspect and OHS Hazards and implementation of controls is necessary to manage the environmental impact and OH&S risks and is consistent with the HSE Policy, objectives and targets to ensure that the same are carried out under specified condition.

Those operations and activities required controls are identified, implemented and maintained in by;

a). Follow–up of identified operational controls applicable to the activities and integrated operational controls in to overall Environmental Health and Safety Management System,
b). Controls related to purchased goods, equipments and services,
c). Controls related to contractors and other visitors to the workplaces by providing appropriate induction,
d). Documented Standard Operating Procedure (SOP/OCP) to cover the situations, where their absence could lead to deviation from the HSE Policy and the objectives,
e). Identified operating criteria in the Operational control plan, where their absence could lead to deviation from the HSE Policy and objectives.

Appropriate planning for operation control and maintenance activity is done in order to ensure that operational activities are carried out under specified conditions as per established procedure.

7.2 Customer Related Processes (Ref. Clause No. → 8.2* of ISO 9001)

7.2.1 Determination of Requirements Related to the Products

The company receives customer orders tenders/verbal / written and requirements are determined clearly. In Company Customer requirements are determined including

a). Product requirements specified by the customer including the requirements for availability, delivery and post delivery activities;
b). Product requirements not specified by the customer but necessary for intended or specified use;
c). Obligations applicable to product, including legal and regulatory requirements (TREM Card).
d). Any additional requirements considered necessary by the organisation.

Post delivery activity includes action under warranty provisions, contractual obligations such as maintenance services and supplementary services such as recycling or final disposal of products.

7.2.2 Review of Requirements Related to the Products

A) As soon as customer inquiries are received for their requirement, it shall be reviewed to ensure that customer's requirements are clearly identified, understood and whether they can be met. If customer provides no documented statement of the requirements then customer requirements are confirmed before acceptance. Matters that are not clear including contract / order requirements previously expressed are resolved with the customer. Normally our customers understand Our Product by name, Ref. Of standard, Specifications, Qty., Delivery And specify in their documents / verbally convey.

B) The internal contract review is carried out as described in Process Flow to assess capability for supply of the product and meet product requirements. In case there is any difference in the specifications of the customer then it can be resolved by carrying out the changes as required by the customer.

C) Prior to commitment to supply a product to the customer, customer orders (written / verbal) are reviewed to ensure that :

- Customer requirements are clearly documented;
- Any variation from the contract is resolved; and
- Company can meet all contractual requirements.

D) **Amendment to a contract**

Subsequent contract variations are documented and subject to similar review. Any amendment to the contract is identified and confirmed with the customer. It is conveyed to the concerned person for changed requirements as per details given in procedure.

E) All the records related to contract are maintained and order is reviewed according to the concerned process flow.

7.2.3 Customer Communication

Company has identified and implemented arrangements for communication with customers related to:

- Product information
- Enquiries, contracts or order handling including amendments
- Customer feedback including customer complaints.
- Whenever receive complaints from customer solution process shall follow according to clause 8.3 (Control of Non conforming Products).

7.3 Designs and Development * (Ref. Clause No. 8.3 of ISO 9001)*

7.3.1 Design & Development Planning *

The design planning and control includes:

- The design & development stages.
- The review, verification and validation that are appropriate to each design & development stages and
- The responsibilities and authorities for design & development.

Planning outputs have been updated, as the design & development progresses.

7.3.2 Design & Development Inputs. *

Inputs relating to product requirements shall be determined and records have been maintained. The inputs include:

- Functional & performance requirements,
- Applicable statutory & regulatory requirements,
- Information derived from the previous similar design where applicable,
- Other requirements essential for design & development.

These inputs have been reviewed for adequacy in terms of completeness, unambiguous and not conflicted with each other.

7.3.3 Design & Development Outputs *

The outputs of the design & development have been provided in a suitable form that enables verification against the design & development input and approved prior to release. The output shall:

- Meet the input requirements for design & development,
- Provide appropriate information for purchasing, production and for service provision,
- Contain or reference products acceptance criteria,
- Specify the characteristics of the product that are essential for its safe and proper use.

7.3.4 Design & Development Review *

At different appropriate stages design & development review have been performed in accordance with planned arrangement to:

- Evaluate the ability of the results of design & development to meet requirements and
- Identify any problems and propose necessary actions.

Participants in these reviews shall include the representatives if functions concerned with the design & development stages being reviewed. Proper records of the review and any necessary actions results have been maintained.

7.3.5 Design & Development Verification *

Verifications have been performed according to the planned arrangements to ensure that the design & development outputs have met the design & development input requirements. Records of the results for verification and necessary actions were maintained.

7.3.6 Design & Development Validation *

Design & development validations have been performed according to the planned arrangements to ensure that the resulting product is capable of meeting the requirements for the specified application or intended use, where known. Validation shall be completed prior to the delivery or implementation of the product and records of the results of validation and necessary actions shall be maintained.

7.3.7 Control of Design & Development Changes *

Design & Development changes shall be identified and records maintained. The changes shall be reviewed, verified and validated as appropriate, and approved before implementation. The review of design and development changes shall include evaluation of the effect of the changes on constituent parts and product

already delivered. Records have been maintained of the results of the review of changes and necessary actions where appropriate.

7.4 Purchasing (Ref. Clause No. → 8.4* of ISO 9001)

7.4.1 Purchasing Process

Suitable controls are established in purchasing process to ensure purchase product conforms to requirements. The type and extend of control are dependent on quality of the final product as described in the Process Approach. The system for selection and evaluation of suppliers / subcontractors has been established on the basis of their ability to supply product in accordance with Organisation requirements as well as follow–up with the environmental requirements. The Records are maintained in the form of Approved Vendors List for all the different category of purchases as well as results of evaluations and follow–up actions. It is updated once in **Six Months** based on vendor rating (Re–evaluation of Supplier).

7.4.2 Purchasing Information

Purchasing information describes the product to be purchased, including;

a). Requirements for approval of product, procedures, processes and equipment,

b). Requirements for qualification of personnel, and

c). Integrated management system requirements

The purchase documents contain data which includes any items described below :

- Reference of specifications, requirements for approval or qualification of. Product, procedures, processes, equipments and personnel
- The clear description with relevant specification / reference of standards, wherever applicable and any other information given in the purchase documents

Authorized person as per Process Approach reviews the purchase document for adequacy of details, quantity, description of goods as applicable prior to release and approval. Company ensures that purchasing data is clearly written in the purchasing documents to avoid ambiguity and is correctly understood by the subcontractor / suppliers. It also includes purchasing activity for services hired by Company.

7.4.3 Verification of Purchased Products

A) Normally our customer never ask to verify our purchased product at subcontractor's / supplier's premises as well as we are not inspecting our product at subcontractor's / supplier's premises. But if in future our customer or we proposes to perform verification activities at the subcontractor's / supplier's premises then suitable arrangement at subcontractor's / supplier's place and method of product release is conveyed to vendor as a part of purchasing information.

B) The incoming inspection and testing or verification of all the products is done as per Quality Plan.

7.5 Production and Service Provision (Ref. Clause No. → 8.5.1* of ISO 9001)

7.5.1 Control of Production and Service Provision

The organisation controls production and service operation through

a. The availability of information that specifies the characteristics of the product,

b. Documented Work Instructions / SOPs / Process Control Parameters are made to define the manner of production, approval of process, monitoring and control of suitable process,
c. As per established maintenance system maintenance of equipment for production and service operation is done and records are maintained to ensure use of suitable equipments,
d. On the process control and utility equipments appropriate measuring and test equipment / instruments, etc. Capable of necessary accuracy and precision are used at the work places.
e. The criteria for workmanship are on implementation of monitoring and measurement of process are defined and documented, and
f. The implementation of product release, delivery and post delivery activities,

7.5.2 Validation of Processes for Production and Service Provision

The processes carried out to manufacture the product are validated in the case where the resulting output cannot be verified by subsequent monitoring or measurement and as a consequence, deficiencies may become apparent only after the product is in use or the service has been delivered. If at any stage the product is not fully verified by subsequent inspection and tests, then the process stage is monitored continuously for its process control parameters to demonstrate the ability of the processes to achieve planned results.

Company has established arrangement for above including the items listed below as applicable;

a). Defined criteria for review and approval (Qualification) of processes,
b). Approval of equipment and qualification of personnel,
c). Use of defined methodologies and procedures
d). Induction Training for concerned interested parties for introduction of new design system*
e). Requirements of records
f). Re–validation.

7.5.3 Identification and Traceability

A) All product, from the time of receipt until despatch are identified by one or more of the followings

- Type, name, batch no./ order no. / lot no., specification, brand name and other precise identification as applicable.
- Make, brand name etc.,
- Self identification
- Others as applicable.

B) The system is laid down for identification of materials by writing necessary details on the related records including its inspection and test status based on the inspection and testing. Materials and all incoming products are identified from receipt to despatch during product realization for name, standards and applicable references as described above.

C) Traceability of the products is maintained by manufacturing batch no. and related records are maintained.

D) All the product at incoming, inprocess and final stage of inspection is having inspection and test status for measurement and monitoring requirements.

7.5.4 Customer Property (Ref. Clause No. 8.5.3 ISO 9001)*

Company has exercised proper care with the customer property, while it is under the Company's control or during processing. Company has identified, verified, protected and safeguarded customer property for use or incorporation into the product. If any customer property is lost, damaged or otherwise found unsuitable for use, Company reports this to the customer and maintains records for the same. The process is followed as below;

- Customer property like, anything for manufacturing may be received by the Company for inclusion of such things in the order requirements.
- Such materials are checked as per the Quality Plan. All the acceptance criteria of the received material are considered as per defined specifications, if not provided by the customer.
- After necessary inspection and testing the accepted Customer Properties are systematically stored in the stores with due care. Such Customer Properties are identified by the name of customer with detail specifications. No further inspection or tests are performed unless otherwise specified in the contract specifications. Customer Properties from receipt onwards are treated as per the routine process and are controlled according to the requirements. Any product that is damaged, lost, non–conforming or otherwise unsuitable for use, is recorded and reported to the customer.
- Verification by the Company does not absolve the customer of the responsibility to provide an acceptable product.
- Establishing specific requirements for contingency actions, when relevant.

*(Note: A customer's or external provider's property can include materials,, components, tools and equipment, premises, intellectual property and personal data.)**

7.5.5 Preservation of Products

Company preserves conformity of product with customer requirements during internal processing till delivery to the intended destination in order to maintain product conformity requirements including identification, handling, packaging, storage and protection. Also necessary controls are established on the Shelf life products

7.6 Control Of Measuring And Monitoring Equipments (Ref. Clause No. → 7.1.5.2* of ISO 9001, 9.1.1* of ISO 14001 and OHSAS 18001)

Company has determined the monitoring and measurement to be undertaken during the processes and products and the monitoring and measuring equipments needed to provide evidence of conformity of product to determined requirements. Appropriate inspection, measuring and test equipment / instruments / software etc. Capable of necessary accuracy and precision are used at the work places to assure conformity of product to specified requirements.

Company has established process to ensure that monitoring and measurement are carried–out and are carried–out in a manner that is consistent with the monitoring and measurement requirements. Equipments are calibrated at the regular intervals and the acceptance criteria established on the basis of stability, purpose and usage, thereby ensuring that it is capable of getting the necessary accuracy and measurement requirements.

Company ensures valid results of the process and products through measuring and monitoring equipments. There are

a). Calibrated or verified, or both, at specified intervals (as per procedure) ore prior to use, against measurement standards traceable to international or national measurement standards. Where no such standards exists, the basis used for calibration or verification shall be retained as documented information.*

b). Adjusted or re–adjusted as necessary,

c). Identified to determine its calibration status,

d). Safeguarded from adjustment that would invalidates the measurement results,

e). Protected from damage and deterioration during handling, maintenance and storage,

Equipments used in our Company are selected based on capability, accuracy and precision of the measurement required to be made to ensure quality. The instruments are calibrated and adjusted at regular intervals as per schedules or prior to use and recorded. All the critical equipments are got calibrated against certified equipment having a known valid relationship to nationally / internationally recognized standard.

The devices used for monitoring and measurement is also included for calibration / verification as per established system and record maintained. Also computer software used to satisfy intended application is included and verification as well as configuration management of computer software (where it is used to monitor and measure the product) is done periodically.

A company assesses and records the validity of the previous measuring results when the equipment is found not to conform to requirements. The Company takes appropriate action on the equipment and any product affected. Procedures are established and details are given for calibration methods, frequency, identification system etc. Calibration status of the equipments are identified by stickers / tags / records to recall back when calibration is due. Equipments are handled in a manner to avoid damage and deterioration during handling, maintenance and storage. Trained persons should handle the equipments to ensure the validity of calibration. The measuring and monitoring devices are safeguarded to eliminate the possibility of invalidation of the calibration or are subjected to calibration before use.

- New or repaired equipments and devices used for inspection are subjected to an initial inspection for accuracy or are proven prior to release for use in testing.

Records of the results of calibration and verification done by outside agency as well as calibration or verification done inhouse are maintained.

7.7 Related Procedure

- PRO/SYS/07 Control of Monitoring and Measuring Equipments.
- PRO/EHSMS/04 Procedure for Operational Control.
- PRO/SYS/13 Procedure for Technical and Project Execution
- PRO/SYS/08 Procedure for Customer Related Process
- PRO/SYS/10 Procedure for Purchasing.
- PRO/SYS/11 Procedure for Production.
- PRO/SYS/12 Procedure for Store
- E/SYS/02/DES Procedure for Dispatch.
- PRO/SYS/09 Procedure for Maintenance

8.0 Measurement, Analysis and Improvement

8.1 General

The quality plan is prepared and implemented to meet quality requirements and identify measurement and monitoring activities needed to assure conformity and achieve improvement. This includes need and use of applicable methodologies including statistical techniques and extent of their use. The details of different stages of inspection, acceptance criteria, sample size etc. are given in quality plan and followed by the company. Various records like list of equipment, skill persons etc. are reviewed and the compatibility of facilities (including documents) is ensured by the Management Representative to achieve the required quality at planning stage. Company has planned and implemented the monitoring, measurement, analysis and improvement processes needed :

a). To demonstrate conformity to product requirements,

b). To ensure conformity of integrated management system, and

c). To continually improve the effectiveness of integrated management system.

8.2 Monitoring And Measurement

8.2.1 Customer Satisfaction

At regular intervals customer survey is taken to collect information on customer's satisfaction. UAAC uses the project consultants Material Inspection Report Approval (site incoming material from UAAC), Site Inspection Instruction Report, Request for Inspection and Approval and Project NCR (Open and Close) to assess the client satisfaction.* Such information is analyzed to measure satisfaction levels of customer and discussed in the Management Review Meeting. Also information on customer satisfaction is collected from the contract review records as apart of routine activities by Parent Organization.

Customer perception includes collecting input from sources such as customer satisfaction surveys, customer data on delivered product quality, use opinion surveys, lost business analysis, compliments, warranty claims, payment certificates*, and dealer reports.

8.2.2 Internal Audit (Ref. Clause No. → 9.2* of ISO 9001 and 4.5.5 of ISO 14001 and OHSAS 18001)

Internal audit of Environmental Quality Health and Safety Management System audit is carried–out **At least once in a year** to

a). Determine whether Environmental Quality Health and Safety Management System

1. Conforms to the planned arrangements for Environmental Quality Health and Safety Management System and ISO 9001:2015, ISO 14001:2015* and OHSAS 18001:2007 requirements,

2. Is implemented and maintained in accordance with the requirements of Environmental Quality Health and Safety Management System,

3. Is effective in meeting the HSE policy and objectives

b). Provide information on the results of audits to the Top Management for effective operation of Environmental Quality Health and Safety Management System.

The internal audit is scheduled in the Company on the basis of the status and importance of activity to be audited and previous audit results. Management Representative prepares the audit plan covering with scope, schedule and other details. Personnel are nominated as auditors and provided audit training. It is ensured that the auditors are independent of the specific activities or areas being audited by them.

Procedure is established and maintained to define the responsibilities and requirements for planning and conducting audits, establishing records and reporting the results.

The auditors verifies implementation of documented Integrated Management System and objective evaluation of the organisation structure, procedures, working practices, resources, accuracy of the work, records etc. The detail system for planning and implementing audit to determine effectiveness of the quality is given in the procedure.

Records of the audits and their results are maintained.

Audit Report and Follow–Up

The Auditor prepares non–conformity report on completion of the audit and the non–conformity is brought to the notice of auditee. They discuss about the appropriate actions to be taken and schedule for implementation in respective any Non–Conformance observed. Audit findings are recorded and used as the main formal means of resolving problems and deficiencies detected in the Integrated Management System. The copies of such NCR reports are given to auditee after taking timely corrective action on NC reports, the auditee calls auditor to verify it and to close NCR. During next audit, implementation and effectiveness of the corrective action taken on NCR's shall be reviewed and recorded.

All the audit findings and verification of audit results are reported to the top management for review and evaluation of the system and taking corrective actions.

8.2.3 Performance Monitoring and Measurement 0f Processes (Ref. Clause No. → 9* of ISO 9001, ISO 14001 and 4.5.1 OHSAS 18001)

Procedure has been documented and implemented for monitoring and measurement of actual performance against the EHSMS performance requirements on regular basis. These procedure provides;

a). Qualitative as well as quantitative measures to meet Company need as well as monitor the key characteristics of operations, which have significant Environmental aspects, OHS Hazards, and achievements of HSE objectives and operational process and the activities.

b). Monitoring performance, operational control points and conformity to the objectives and targets.

c). Monitoring the effectiveness of controls (for environmental, health as well as for safety),

d). Proactive measures of performance that monitor conformance with the Environmental Health And Safety Management Programmes(s),

e). Reactive measures of performance that monitor environmental hazards, ill health, incidents (including accidents, near misses, etc.) and other historical events of deficient HSE performance,

f). Recording of data and results of monitoring and measurement sufficient to facilitate subsequent corrective and preventive actions analysis.

Results of analysis are recorded to track performance, relevant operational controls and conformance with the HSE objectives and targets.

The results are analysed to determine the areas of success and to identify areas requiring corrective action and improvement on the basis of performance indicators, which have been laid down in the relevant HSE management programmes.

Equipment used for Monitoring and measuring are also calibrated / verified to ensure accuracy / required precision as per the documented procedure and records for the same are maintained.

8.2.4 Measurement and Monitoring Of Product

Quality Plan has been established for ensuring that all the incoming, inprocess and final stage products are not issued before it has been verified for conformity of specified requirements. The amount and extent of inspection is determined on the basis of recorded evidence of their past performance. Evidence of conformity with the acceptance criteria is recorded in the inspection and test records alongwith authorised person's signature for release of products for delivery to customer.

No products are dispatched until all the testing activities specified in Quality Plan are completed and authorised person verifies test records. Documentary evidence in the form of records are maintained at all stages of inspection / verifications to ensure that the products are inspected as per Quality Plan and passes through the inspection tests with the desired acceptance criteria.

Evaluation of compliance (Ref. Clause No. → 9.1.2* of ISO 14001 and 4.5.2 *OHSAS 18001)

Procedure is documented and implemented for periodical evaluation for compliance with the applicable legal requirements. Also to ensure that Organization is consistent with the commitment towards compliance with all such legal requirements. Records of such periodic evaluation are maintained in the Register of Rules and Regulation.

Also evaluation with the other requirements is done as per the above-established procedure. Records of such periodic evaluation are also maintained in the Register of Rules and Regulation.

8.3 Control of Non–Conforming Product (Ref. Clause No. 10.2 & 10.2.2 of ISO 9001)*

The detail procedure is established for identification, documentation, evaluation, segregation and disposition of non–conforming incoming, inprocess and the final product in production and inspection area.

When a non conformity occurs, including any arising from complaints, the organization shall:*

a) React to nonconformity.*

b) Evaluate the need for action to eliminate the cause of non conformity in order that it does not recur or occur elsewhere.*

c) Implement any action needed.*

d) Review the effectiveness of the corrective action.*

e) Update risks and opportunities determined during planning, if necessary.*

f) Make changes to the quality management system if necessary.*

The concerned persons are informed for disposal of non–conforming product.

The non–conforming products are reviewed after inspection in accordance with the documented procedure and subject to decision taken as per following.

- Re–worked to meet the specified requirements,
- Down gradation
- Rejected and scrapped,

If non–conforming product is identified after delivery or use has started, then **Company** takes appropriate action regarding the consequences of the non–conformity. All the re–processed product are re–inspected / re–tested for specified requirement as described in documented procedure. The details of non–conformity and concession accepted by the customer, end user or other body as applicable should be reported and recorded.

Records of the nature of non–conformities and any subsequent actions taken, including concessions obtained are maintained.

UAAC shall retain documented information as evidence of:*

a) The nature of the nonconformities and any subsequent actions taken;*

b) The results of any corrective action.*

Incidents, investigation, Non–conformity, corrective action and preventive action (Ref. Clause No. → 10.2* of ISO 14001 and 4.5.3* of OHSAS 18001)

Incident investigation

Procedure is documented and implemented for recording, investigating and analyzing the incident and non–conformity in order to ;

a). Determine underlying EHSMS deficiencies and other factors that might be causing or contributing to the occurrence of incidents, accidents,
b). Identify the need for corrective action,
c). Identify opportunities for preventive action,
d). Identify opportunities for continual improvement,
e). Communicate the results of such investigations to all employees within the Organization.

The investigations are performed as soon as it is detected alongwith the environment and safety committee employees for effective analysis.

Identified corrective and preventive actions are taken as per the details given in the next paragraph.

The results of investigation are documented and maintained for further action.

Non–conformity, corrective action and preventive action

Procedure is documented and implemented for dealing with the actual and potential accidents, incidents, non–conformity and taking corrective and preventive action. Procedure also defines responsibility and authority for analysis, handling, investigating accidents, incidents, Non–conformity and taking action to mitigate any consequences from non–conformity and for initiating and completing corrective and preventive actions. Procedure also defines the followings ;

a). Identifying and correcting accidents, incidents, non–conformity and taking action to mitigate their Environmental aspects, OHS Hazards,
b). Investigate accidents, incidents, non–conformity, determining their cause and taking actions in order to avoid their recurrence,
c). Evaluating the need for action to prevent accidents, incidents, non–conformity and implementing appropriate actions designed to avoid their occurrence,
d). Recording the results of corrective and preventive action taken, and
e). Reviewing the effectiveness of corrective and preventive action taken

All the proposed corrective and preventive actions are reviewed through the risk assessment system prior to implementation. Respective Functional Heads review the effectiveness of corrective and preventive actions taken.

The corrective or preventive actions taken are appropriate to the magnitude of problems and commensurate with risk and the Environmental aspects, OHS Hazards encountered.

Changes to the documents are also done as per the Document control procedure as a part of corrective and preventive actions.

Emergency preparedness and response (Ref. Clause No. → 8.2* of ISO 14001 and 4.4.7* of OHSAS 18001)

The organization has established disaster management plan to ensure appropriate responses;

a). To potential emergency situations and potential accidents / incidents to the Environmental aspects and OHS Hazards,

b). Mechanism for responding to such emergency situation.

Company has prepared Major Emergency Preparedness plan and periodic mockdrill is conducted to respond the actual emergency situations and to prevent or mitigate associated adverse environmental and OHS consequences.

A procedure has been established for preventing and mitigating the Impacts and risks of such emergency situation, which can cause to environmental hazards, illness, injury to the Environmental aspects and OHS Hazards, adverse environmental impacts and OHS Risks etc.

The organization reviews and revises its emergency preparedness and response procedures after the occurrence of accidents or emergency situations, where necessary as well as results of mockdrill. It also includes views of interested parties, where required time to time basis.

Mockdrill are also conducted **once in a year** for testing / verification of such emergency preparedness as per established procedure.

8.4 Analysis of Data

The data generated during measuring and monitoring activities and other relevant sources are analysed to provide information on

- Customer satisfaction
- Conformance to product requirements
- Characteristics of processes, product and their trends
- Suppliers performance and evaluation

8.5 Improvement

8.5.1 Continual Improvement

The process is laid down for follow up of process for continual improvement of the Integrated Management System.

The continual improvement of EQHSMS is facilitated through the use of Quality Policy, HSE Policy, objectives, audit results, analysis of data, corrective and preventive action and management review.

8.5.2 Corrective Actions (Ref. Clause No. → 10.2* of ISO 9001, ISO 14001 and 4.5.3 of OHSAS 18001)

The procedure is documented for corrective action, which includes

a). Identification of action for customer / interested parties complaints, non–conformity and product non–conformities, environmental non–conformity etc.
b). Investigation of the cause of non–conformities relating to product, process, environmental and Integrated Management System and recording the results of the investigation.
c). Evaluation for the need of actions to ensure that non–conformity's does not repeat

d). The corrective action needed to eliminate the cause of non–conformities is determined and implemented
e). Recording the results of action taken.
f). Reviewing the effectiveness of the corrective action taken.

8.5.3 Preventive Actions (Ref. Clause No. → 4.5.3* of OHSAS 18001)*

The preventive action is identified to eliminate the causes of potential non–conformities to prevent occurrence and are appropriate to the impact of the potential problems.

a). Potential cause of non–conformances is addressed by analysis of information from production processes, product quality reports, audit reports, environmental and customer complaints / interested parties complaints.

b). Evaluation of the need for action to prevent occurrence of non–conformities,
c). The action needed to prevent potential problems is determined.
d). Determine and ensure the implementation of the preventive action needed. Records of results of action taken
g). Reviewing the effectiveness of the preventive action taken.

Preventive action undertaken and outcomes are submitted for management review.

Records

The records for handling of customer / interested parties complaints and various records for corrective and preventive actions are maintained. The records of corrective and preventive actions taken are submitted to the management for their review.

8.6 Related Procedure

- PRO/SYS/06 Procedure for corrective and preventive actions.
- PRO/SYS/04 Procedure for internal audit.
- PRO/ESMHS/05 * Procedure for emergency preparedness and response.
- PRO/ESMHS/06 * Procedure for performance, monitoring and measurement.
- PRO/ESMHS/07 * Procedure For accidents, incidents, non–conformances and corrective and preventive actions
- PRO/PRD/01 Procedure for control of non–conforming products.

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
1	**Scope**	1	Scope	**1**	**Scope**	**1**	**Scope**		
		1.1	General						
4	**Context of Organization**	**4**	**Quality Management System**	**4**	**Context of Organization**	**4**	**OH & S Management System Requirements**		
4.1	Understanding the Organization and Its Context	4	Quality Management System	4.1	Understanding the Organization and Its Context			New UAAC Strategy	E/SYS/04
								Procedure for Context of Organization	PRO/SYS/15
								UAAC Organization Chart 2016 (Internal)	Annexure III issue 1.3
								UAAC Industrial Vicinity Plan	E/SYS/03
4.2	Understanding the Needs and Expectation of Interested Parties	4	Quality Management System	4.2	Understanding the Needs and Expectation of Interested Parties			UAAC SWOT Analysis 2016	E/SYS/06
		5.6	Management Review						
4.3	Determining the Scope of the Quality Management System	1.2	Application	4.3	Determining the Scope of the Quality Management System			UAAC Vision and Mission 2016	E/SYS/07
		4.2.2	Quality Manual					UAAC Quality Management Manual and System Procedures	SYS 01 ISO9001:2015
4.4	Quality Management System and its Processes	4	Quality Management System	4.4	Environmental Management System			Procedure for Process Definition	PRO/SYS/16
		4.1	General Requirements						
5	**Leadership**	**5**	**Management Responsibility**	**5**	**Leadership**				
5.1	Leadership and Commitment	5.1	Management Commitment	5.1	Leadership and Commitment				
5.1.1	General	5.1	Management Commitment						

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
5.1.2	Customer Focus	5.2	Customer Focus						
5.2	Policy	5.3	Quality Policy	5.2	Environmental Policy	4.2	OH & S Policy	UAAC Policy	Annexure IV Quality Manual Issue 1.1
5.2.1	Establishing the Quality Policy	5.3	Quality Policy						
5.2.2	Communicating the Quality Policy	5.3	Quality Policy						
5.3	Organizational Roles, Responsibilities and authorities	5.5.1	Responsibility and Authority	5.3	Organizational Roles, Responsibilities and authorities				
		5.5.2	Management Representative						
		5.4.2	Quality Management System Planning						
6	**Planning**	5.4.2	Quality Management System Planning	**6**	**Planning**				
6.1	Actions to Address Risks and Opportunities	5.4.2	Quality Management System Planning	6.1	Actions to Address Risks and Opportunities	4.3.1	Hazard Identification, Risk Assessment and Determining Controls	Aspects & Impacts Identification	PRO/EHSMS/01-A
								Hazard Identification & Risk Control Procedure for Risk Management	PRO/EHSMS/01-B
		8.5.3	Preventive Action			4.3.2	Legal Requirements	Procedure for Legal and Other Requirements	PRO/EHSMS/02
6.2	Quality Objectives and Planning to Achieve Them	5.4.1	Quality Objectives	6.2	Environmental Objectives	4.3.3	Objectives, Targets and Program	UAAC QHSE 2016 Objectives and Programs	F/QEHSMS/01
								Procedure to Write Objectives	E/SYS/10-A
6.3	Planning of Changes	5.4.2	Quality Management System Planning					Procedure for Change Management	PRO/SYS/14
7	**Support**	**6**	**Resource Management**	**7**	**Support**				
7.1	Resources	6	Resource Management	7.1	Resources				

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
7.1.1	General	6.1	Provision of resources						
	People	6.1	Provision of Resources						
7.1.3	Infrastructure	6.3	Infrastructure					Procedure for Maintenance	PRO/SYS/09
								UAAC Infrastructure 2016	E/SYS/05
7.1.4	Environment for the Operation of Processes	6.4	Work Environment					Study for Environmental Effects for UAAC by Al Haratani Environmental Consultancy	UAAC Environmental Effects Report 2016
7.1.5	Monitoring and Measuring Resources	7.6	Control of Monitoring and Measuring Equipment					Procedure for Calibration	PRO/SYS/07
								KPIs Register	F/SYS/23
7.1.5..5.2	Measurement Traceability	7.6	Control of Monitoring and Measuring Equipment						
7.1.6	Organizational Knowledge	0	No Equivalent Cause						
7.2	Competence	6.2.1	General	7.2	Competence	4.4.2	Competence, Training Awareness	Procedure for Training	PRO/SYS/05
		6.2.2	Competence, Training and Awareness					UAAC Job Description	Job Description
7.3	Awareness	6.2.2	Competence, Training and Awareness	7.3	Awareness			UAAC Updated Training Workshops 2016	CPC QHSE Maintenance Project Status Summary Report May 2016
7.4	Communication	5.5.3	Internal Communications	7.4	Communication	4.4.3	Communication, Participation and Consultation	Procedure for Consultation and Communication	PRO/EHSMS/03
7.5	Documented Information	4.2	Documentation Requirements	7.5	Documented Information	4.4.5	Control of Documents	Procedure for Documented Information Control	PRO/SYS/19
								Procedure for Document and Data Control	PRO/SYS/03B
								Procedure for Control of Records	PRO/SYS/03
						4.5.2	Compliance	Procedure for Legal and Other	PRO/EHSMS/02

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
							Obligation	Requirements	
								List of Laws Compliance Status	F/EHSMS/13
7.5.1	General	4.2.1	General	7.5.1	General				
7.5.2	Creating and Updating	4.2.3	Control of Documents	7.5.2	Creating and Updating				
		4.2.4	Control of Records						
8	**Operation**	**7**	**Product Realization**	**8**	**Operation**				
8.1	Operational Planning and Control	7.1	Planning of Product Realization	8.1	Operational Planning and Control	4.4.6	Operational Control	Procedure for Operational Control	PRO/EHSMS/04
								Procedure for Risk Management	PRO/EHSMS/1-B
								Risk Assessment General Log	F/SYS/28
8.2	Requirements for Products and Services	7.2	Customer Related Processes	8.2	Emergency Preparedness and Response	4.4.7	Emergency Preparedness	Procedure for Emergency Preparedness and Response	PRO/EHSMS/05
								Procedure for Sales	PRO/SYS/18
8.2.1	Customer Communication	7.2.3	Customer Communication					Procedure for Customer Related Process	PRO/SYS/08
8.2.2	Determination of Requirements for Products and Services	7.2.1	Determination of requirements Related to the Products						
8.2.3	Review of the Requirements for Products and Services	7.2.2	Review of Requirements related to the Product						
8.2.4	Changes to requirements for Products and Services	7.2.2	Review of Requirements related to the Product						
8.3	Design and Development of Products and Services	7.3	Design and Development						
8.3.1	General	7.3.1	Design and Development						

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
			Planning						
8.3.2	Design and Development Planning	7.3.1	Design and Development Planning						
8.3.3	Design and Development Inputs	7.3.2	Design and Development Inputs					Procedure for Technical and Project Execution	PRO/SYS/13
8.3.4	Design and Development Controls	7.3.4	Design and Development Review						
		7.3.5	Design and Development Verification						
		7.3.6	Design and Development Validation						
8.3.5	Design and Development Outputs	7.3.3	Design and Development Outputs						
8.3.6	Design and Development Changes	7.3.7	Control of Design and Development Changes						
8.4	Control of Externally Provided Processes, Products and services	7.4.1	Purchasing Process					Procedure for Outsource Process	PRO/SYS/17
8.4.1	General	4.1	General Requirements						
		7.4.1	Purchasing Process						
8.4.2	Type and Extent of Control	7.4.1	Purchasing Process					Procedure for Store and Warehouse	PRO/SYS/12
		7.4.3	Verification of Purchase Products						
8.4.3	Information for External Providers	7.4.2	Purchasing Information					Procedure for Purchasing	PRO/SYS/10

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
		7.4.3	Verification of Purchase Product						
8.5	Production and Service Provision	7.5	Production and Service Provision						
8.5.1	Control of Production and service Provision	7.5.1	Control of Production and service Provision					Procedure for Process Control and QC Inspection	PRO/SYS/11
		7.5.2	Validation of Process for Production and Service Provision					UAAC QC Plan and Glass Factory Method for Inspection of Glass	QC Plan, Glass Factory Method of Inspection of Glass Manual
8.5.2	Identification and Traceability	7.5.3	Identification and Traceability						
8.5.3	Property Belonging to Customer or External Provider	7.5.4	Customer Property						
8.5.4	Preservation	7.5.5	Preservation of Product						
8.5.5	Post Delivery Activities	7.5.1	Control of Production and Service Provision					Procedure for Dispatch	E/SYS/02
8.5.6	Control of Changes	7.3.7	Control of design and Development Changes						
8.6	Release of Products and Services	7.4.3	Verification of Purchase Product						
		8.2.4	Monitoring and Measurement Control						
8.7	Control of Non Conforming Outputs	8.3	Control of non Conforming Product					Procedure for Disposal of Non conforming Output	PRO/PRD/01
9	**Performance Evaluation**	**8**	**Measurement, Analysis and**	**9**	**Performance Evaluation**				

ISO 9001:2015		ISO 9001:2008		ISO 14001:2015		OSHAS 18001:2007		TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER
			Improvement						
9.1	Monitoring, Measurement, Analysis and Evaluation	8	Measurement, Analysis and Improvement	9.1	Monitoring, Measurement, Analysis and Evaluation	4.5.1	Performance, Measurement and Monitoring	Procedure for Performance, Monitoring and Measurement	PRO/EHSMS/06
								Procedure for Control of Monitoring and Measurement	PRO/SYS/07
9.1.1	General	8.1	General	9.1.1	General				
		8.2.3	Monitoring and Measurement Processes						
9.1.2	Customer Satisfaction	8.2.1	Customer satisfaction						
9.1.3	Analysis and Evaluation	8.4	Analysis of Data					Procedure for Measuring KPI	PRO/SYS/18
9.2	Internal Audit	8.2.2	Internal Audit	9.2	Internal Audit			Procedure for Internal Audit	PRO/SYS/04
9.3	Management Review	5.6	Management Review	9.3	Management Review	4.6	Management Review	Procedure for Management Review	PRO/SYS/01
9.3.1	General	5.6.1	General						
9.3.2	Management Review Input	5.6.2	Review Input						
9.3.3	Management Review Output	5.6.3	Review Output						
10	**Improvement**	**8.5**	**Improvement**	**10**	**Improvement**				
10.1	General	8.5.1	Continual Improvement	10.1	General				
10.2	Non conformity and Corrective Action	8.3	Control of Non Conforming Product	10.2	Non conformity and Corrective Action	4.5.3	Incident Investigation, Non conformity, Corrective and Preventive Action	Procedure for Accident, Incident, Non conformance, Corrective and Preventive Action	PRO/EHSMS/07
		8.5.2	Corrective Action					Procedure for Corrective and Preventive Action in Line with Risk Management	PRO/SYS/06
								Procedure for Control of Non conforming Outputs	PRO/PRD/01
10.3	Continual Improvement	8.5.1	Continual Improvement	10.3	Continual Improvement				
		8.5.3	Preventive Action						

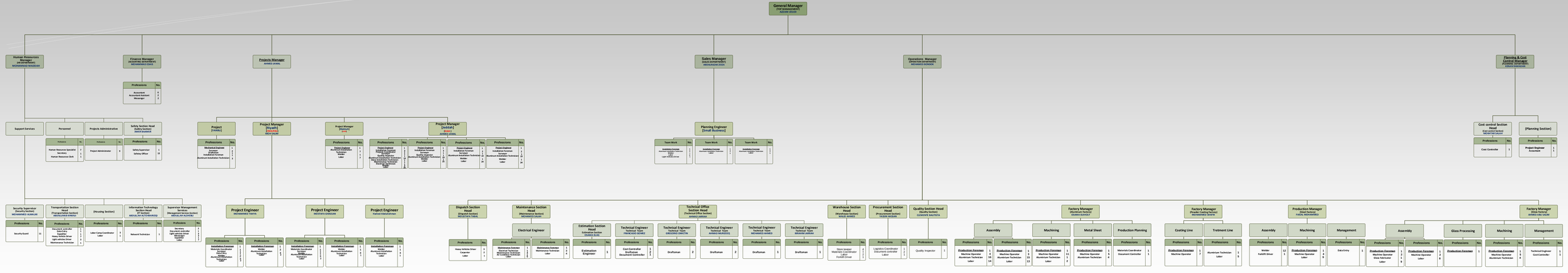
ISO 9001:2015	ISO 9001:2008	ISO 14001:2015	OSHAS 18001:2007	TITLE OF PROCEDURES/EXHIBITS/MANUALS	PROCEDURE CODE NUMBER

Annexure – II, Glossary Of Terms

Sr. No.	Abbreviation	For
1.	UAAC	United Arab Aluminum Company
2.	Top Management	Managing Director / Directors / GM
3.	Functional Heads	Marketing Head, Purchase Head, Works Head, Production Head, Packing Incharge, Safety Officer, QC Head, Stores Incharge, Despatch Incharge etc.
4.	Ref.	Reference
5.	ANX	Annexure
6.	PRO	Procedures
7.	MR	Management Representative
8.	QMS	Quality Management System
9.	EHSMS	Environmental, Health and Safety Management System
10.	SYS	Quality Management System, Environmental Management System and Occupational Health and Safety Management System
11.	NCR	Non Conformity Report
12.	IANCR	Internal Audit Non Conformity Report
13.	AVL	Approved Vendor List
14.	CAR	Corrective Action Report
15.	PAR	Preventive Action Report
16.	EHSMP	Environment Health and Safety Management Plan / Programme
17.	HSE	Health Safety and Environment
18.	EQHSMS	Environment, Quality, Health and Safety Management System
19.	OHS	Occupational Health and Safety
20.	OHSAS	Occupational Health and Safety Assessment System
21.	SOP	Standard Operating Procedure
22.	OCP	Operational control plan
23.	KPI	Key Performance Indicator
24.	SWOT	Strengths Weaknesses Opportunities Threats
25.	EBITDA	Earnings Before Interest, Taxes Depreciation Amortization
26.	IMS	Integrated Management System

Human Resources Department

ORGANIZATION CHART
United Arab Aluminum Company



Prepare & Design By :
Ya'dajlanh

Tuesday, February 02, 2021

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Annexure – IV, Quality Policy

QUALITY, HEALTH, SAFETY AND ENVIRONMENT POLICY

We, at UAAC are committed to high standards of quality, health, safety and environmental practices in our business operations as stated in our strategy.
To achieve this, we commit ourselves to:

1. Satisfy our customers by meeting and exceeding their requirements and expectations by supplying consistent quality products.

2. Implement initiatives to prevent pollution, conserve natural resources and minimize the overall effects of company operations on environment, health and safety.

3. Reduce/eliminate occupational illness, injuries and incidents at the work place.

4. Comply with all applicable laws and regulations and other requirements to which we subscribe.

5. Implement management system conforming to the requirement of ISO 9001:2015, ISO 14001:2015, OHSAS 18001:2007 and continually improve its effectiveness.

6. Provide adequate resources for implementing and managing QHSE management system effectively.

7. Strengthen awareness, skills and competence of employees and contract's workmen and also foster dialogue with vendors, customers and community.

We shall communicate this policy to all personnel working with or on behalf of the company and to interested parties on demand.

3-2-2016

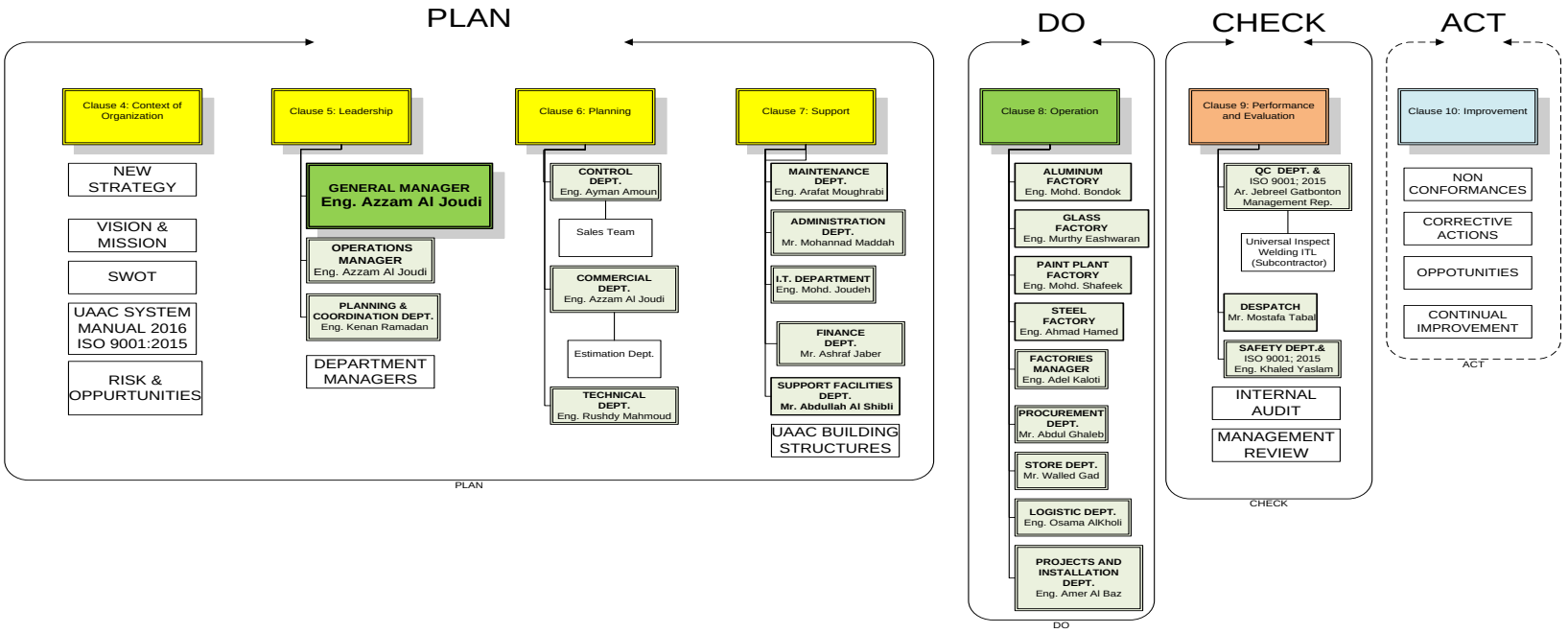
Eng. Azzam Al Joudi
General Manager

Annexure IV
Issue No. 1.3
01 January 2016

Controlled Copy

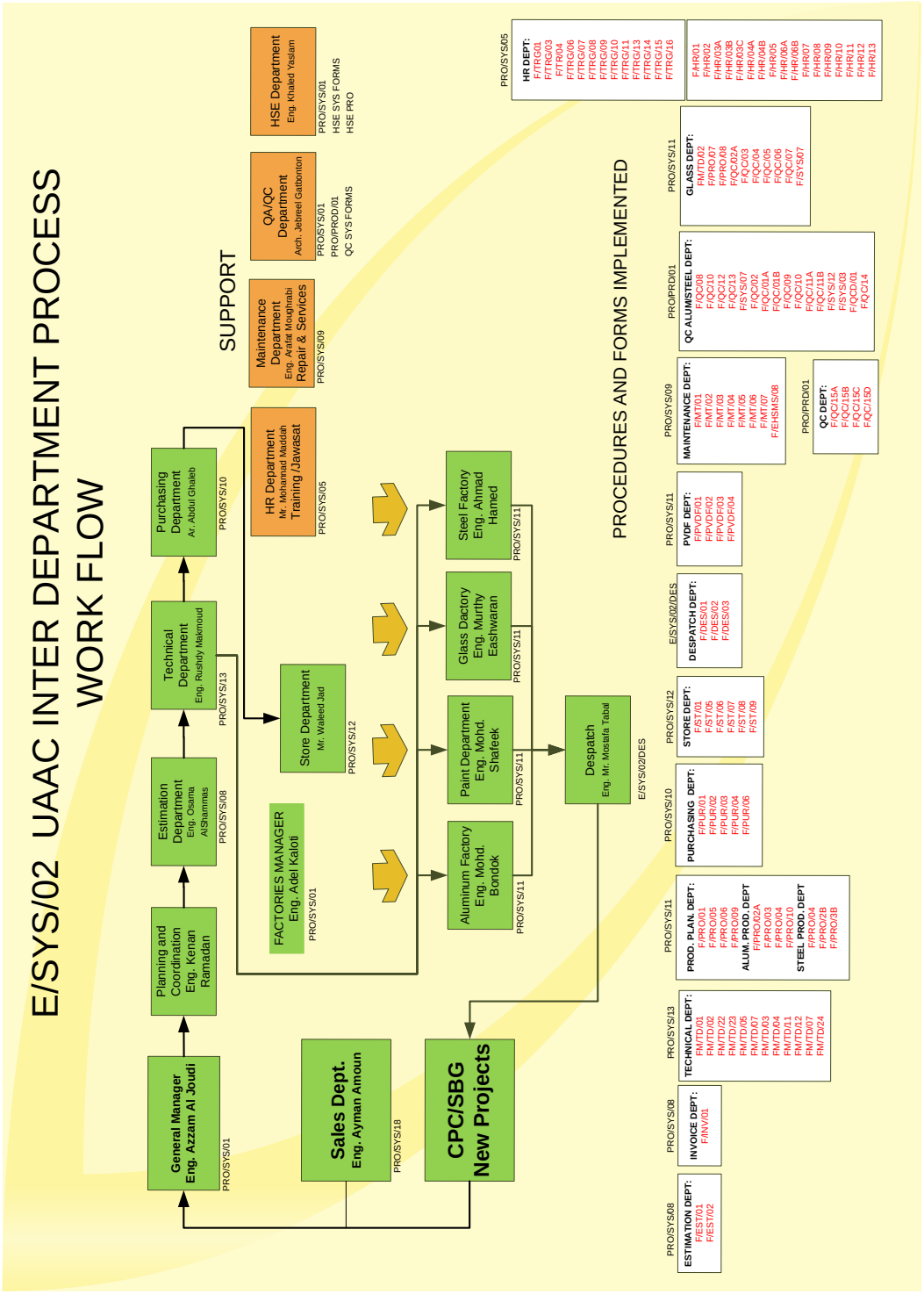
Annexure –V, Organization Structure

UAAC Organization Chart in line with PLAN DO CHECK ACT Cycle Structure (Internal)
03 May 2016



LIST OF ABBREVIATED FORMS

Type of Document	Documents Series	Departments
Procedure , Exhibits , Work Instructions , SOP , OCP , Formats , and other third or fourth tier documents.	**QMS/EHSMS/EQHSMS / IMS/SYS/ STCK** SERIES DOCUMENTS	Management Representative / MR Co-0rdinator
	HR. Series Documents **TRG** Series Documents	Human Resources Department
	TD. Series Documents	Technical Department
	EST. Series Documents	Estimation Department
	PUR. Series Documents	Purchasing Department
	ST. Series Documents	Store Department
	PRO. Series Documents	Production Department
	QC Series Documents	Quality Control Department
	DES. Series Documents	Dispatch Department
	GLS Series Documents	Glass Department
	PVDF Series Documents	Powder Coating Department
	INV Series Documents	Invoice Department
	MT Series Documents	Maintenance Department
	INV Series Documents	Invoice Department
	SA Series Documents	Sales Department
	DI Series Documents	Documented Information


E/SYS/02 UAAC INTER DEPARTMENT PROCESS WORK FLOW
SUPPORT
PROCEDURES AND FORMS IMPLEMENTED
General Manager Eng. Azzam Al Joudi
Planning and Coordination Eng. Kenan Ramadan
Estimation Department Eng. Osama AlShammas
Technical Department Eng. Rushdy Makmoud
Purchasing Department Ar. Abdul Ghaleb
HR Department Mr. Mohannad Maddah Training /Jawasat
Maintenance Department Eng. Arafat Moughrabi Repair & Services
QA/QC Department Arch. Jebreel Gatbonton
HSE Department Eng. Khaled Yaslam
FACTORIES MANAGER Eng. Adel Kaloti
Store Department Mr. Waleed Jad
Aluminum Factory Eng. Mohd. Bondok
Paint Department Eng. Mohd. Shafeek
Glass Dactory Eng. Murthy Eashwaran
Steel Factory Eng. Ahmad Hamed
Despatch Eng. Mr. Mostafa Tabal
Sales Dept. Eng. Ayman Amoun
CPC/SBG New Projects
PRO/SYS/01
PRO/SYS/08
PRO/SYS/13
PRO/SYS/10
PRO/SYS/05
PRO/SYS/09
PRO/SYS/12
PRO/SYS/11
E/SYS/02/DES
PRO/SYS/18
PRO/PRD/01
PRO/SYS/05
HR DEPT:
F/TRG01
F/TRG/03
F/TR/04
F/TRG/06
F/TRG/07
F/TRG/08
F/TRG/09
F/TRG/10
F/TRG/11
F/TRG/13
F/TRG/14
F/TRG/15
F/TRG/16
F/HR/01
F/HR/02
F/HR/03A
F/HR/03B
F/HR/03C
F/HR/04A
F/HR/04B
F/HR/05
F/HR/06A
F/HR/06B
F/HR/07
F/HR/08
F/HR/09
F/HR/10
F/HR/11
F/HR/12
F/HR/13
PRO/SYS/11
GLASS DEPT:
FM/TD/02
F/QC/07
F/PRO/08
F/QC/02A
F/QC/03
F/QC/04
F/QC/05
F/QC/06
F/QC/07
F/SYS07
PRO/PRD/01
QC ALUMSTEEL DEPT:
F/QC/08
F/QC/10
F/QC/12
F/QC/13
F/SYS/07
F/QC/02
F/QC/01A
F/QC/01B
F/QC/09
F/QC/14A
F/QC/11B
F/SYS/12
F/SYS/03
F/QCD/01
F/QC14
PRO/SYS/09
MAINTENANCE DEPT:
F/MT/01
F/MT/02
F/MT/03
F/MT/04
F/MT/05
F/MT/06
F/MT/07
F/EHSMS/08
PRO/PRD/01
QC DEPT:
F/QC/15A
F/QC/15B
F/QC/15C
F/QC/15D
PRO/SYS/11
PVDF DEPT:
F/PVDF/01
F/PVDF/02
F/PVDF/03
F/PVDF/04
E/SYS/02/DES
DESPATCH DEPT:
F/DES/01
F/DES/02
F/DES/03
PRO/SYS/12
STORE DEPT:
F/ST/01
F/ST/05
F/ST/06
F/ST/07
F/ST/08
F/ST/09
PRO/SYS/10
PURCHASING DEPT:
F/PUR/01
F/PUR/02
F/PUR/03
F/PUR/04
F/PUR/06
PRO/SYS/11
PROD. PLAN. DEPT:
F/PRO/01
F/PRO/05
F/PRO/06
F/PRO/09
ALUM. PROD. DEPT
F/PRO/02A
F/PRO/03
F/PRO/04
F/PRO/10
STEEL PROD. DEPT
F/PRO/04
F/PRO/02B
F/PRO/03B
PRO/SYS/13
TECHNICAL DEPT:
FM/TD/01
FM/TD/02
FM/TD/22
FM/TD/23
FM/TD/05
FM/TD/07
FM/TD/03
FM/TD/04
FM/TD/11
FM/TD/12
FM/TD/17
FM/TD/24
PRO/SYS/08
INVOICE DEPT:
F/INV/01
PRO/SYS/08
ESTIMATION DEPT:
F/EST/01
F/EST/02
HSE SYS FORMS
HSE PRO
QC SYS FORMS

Department	United Arab Aluminum Company	No.	E/SYS/03
SYS		Issue No.	01
	UAAC VICINITY MAP	Date	01–01–2016

ALUMINUM FACTORY Machines LIST

SN.	MACHINE DESCRIPTION	QTY.
1	CUTTING (ELECTRONIC TWIN HEAD- EMMEGI)	1
2	CUTTING (ELECTRONIC TWIN HEAD- EMMEGI)	1
3	CUTTING (SINGLE AXIS ELECTRONIC TWIN HEAD- ELUMATEC)	1
4	MILLING- ELUMATEC	1
5	MILLING- ROUTER, COPY, SINGLE SPINDLE- ELUMATEC	1
6	MILLING- ROUTER, COPY, TWO SPINDLE- ELUMATEC	1
7	MILLING- ROUTER, COPY, TWO SPINDLE- ELUMATEC	1
8	BENDIND MACHINE	1
9	BENDING & ROLLER SHEET	1
10	BENDING & ROLLER SHEET	1
11	SBZ-140 (CNC, PROFILE CENTER- ELUMATEC)	1
12	MILLING (CNC MACHINE CENTER MODEL- EMMEGI)	1
13	MILLING (CNC MILLING, DRILLING, CUTTING- EMMEGI)	1
14	SBZ-150 (CNC WORK CENTER, 5 AXIS- ELUMATEC)	1
15	CUTTING (5 AXIS ELCTRONIC TWIN HEAD- ELUMATEC)	1
16	CUTTING (5 AXIS ELCTRONIC TWIN HEAD- ELUMATEC)	1
17	CUTTING (E255 TWING HEAD- ELUMATEC)	1
18	CUTTING (ELECTRONIC TWIN HEAD- EMMEGI)	1
19	NOCHING (NOCHING END- ELUMATEC)	1
20	NOCHING (NOCHING END- ELUMATEC)	1
21	CUTTING (AUTOMATIC SINGLE HEAD- ELUMATEC)	1
22	CUTTING (AUTOMATIC SINGLE HEAD- ELUMATEC)	1
23	CUTTING (ERMAK)	1
24	CUTTING (ERMAKSAN, CNC HVR 6100*13)	1
25	BENDING (ERMAKSAN, POWER BEND PRO 6100*320)	1
26	BENDING (HYDROPOWER)	1
27	FLEXICAM	1
28	FLEXICAM	1
29	FLEXICAM	1
30	55 NOS. FABRICATION TABLE	1

Glass-Factory Machines

Machine Type	Company	Limitation	
		Minimum size (mm.)	Maximum size (mm.)
Cutting M/c	LISEC	300 x 300	6000 x 3210
Grinding M/c	BYSTRONIC	300 x 300	3500 x 2700
Tempering	GLASTON	300 x 300	4800 x 2440
Double Glass (Lisec)	LISEC	300 x 300	3200 x 2400
Lamination M/c	BYSTRONIC	300 x 300	4500 x 2500
Sand Blasting M/c		300 x 300	4000 x 2000
Polishing M/c		300 x 300	4000 x 2000
Driling M/c		300 x 300	2000 x 2000
Cutting M/c	LISEC	300 x 300	6000 x 3000
Grinding M/c	LISEC	300 x 300	6000 x 3300
Tempering M/c	GLASTON	300 x 300	6000 x 2800
Double Glass (Bystronic)	BYSTRONIC	300 x 300	5000 x 2700
Lamination M/c	BYSTRONIC	300 x 650	6000 x 3210
Screen Printing M/c	HS SILK SCREEN	300 x 300	6000 x 3000
Heat Sock M/c *(TMB)*	TMB	300 x 300	8000 x 3000
Heat Sock M/c (*BLOKKLIN*)	BLOKKLIN	300 x 300	8000 x 3000

STEEL FACTORY

Machinery

S.N.	BRAND	Machine Name	Unit	Remarks
1	CMC	WATERJET MACHINE- CNC	2	
2	ERMAK	STEEL BENDING MACHINE	1	Bending Capacity - 6mm
3	HYDRA POWER	STEEL SHERING MACHINE	1	Shering Capacity - 6mm
4	SUNRISE	STEEL PUNCHING MACHINE	2	Punch- Capacity - 30mm
5	SUNRISE	STEEL PUNCHING MACHINE - SMALL	1	Punch- Capacity - 6mm
6		LATH MACHINE	1	
7		STAND DRILL MACHINE	3	
8		PLASMA MACHINE - BIG	1	Capacity- 60mm
9		PLASMA MACHINE - SMAAL	1	Capacity - 30mm
10		STEEL CUTTER SAW	2	Capacity - 5mm
11		TOOL GRINDER	1	
12	ELUMATIC	SMAAL PUNCHING MACHINE	1	
13		WELDING MACHINE	17	
14		MAGNETIC DRILL MACHINE	3	
15		ELECTRIC TAPPING DRILL	3	
16		ARGAN WELDING MACHINE	1	
17		SMALL - HAND WELDING	2	
18		GRINDER	12	
19		ELECTRIC FAN	22	
20		FORKLIFT	1	
21		OXYGEN GAS CUTTER	3	

Powder Coating -Factory Machines

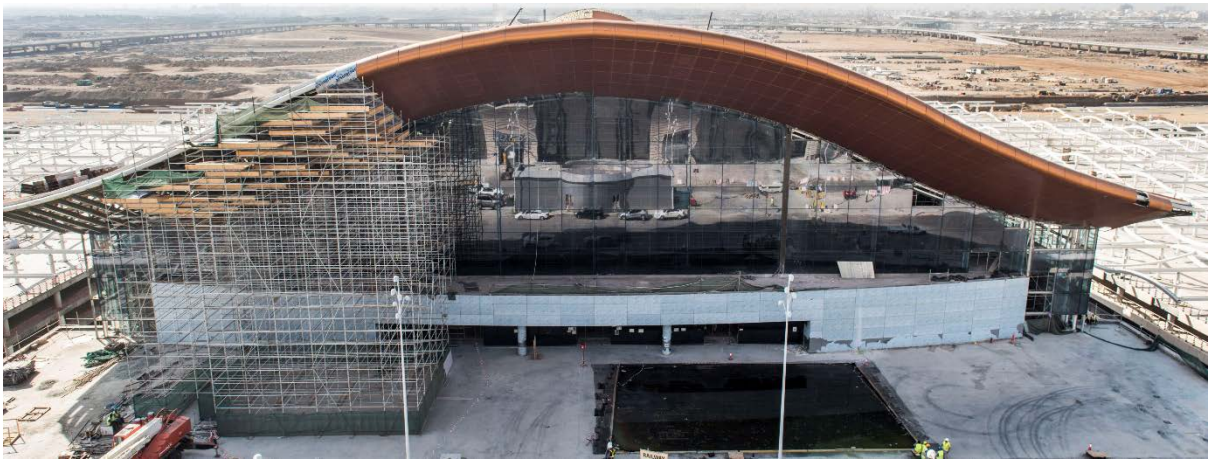
Machine	Capacity Ton/ Shift
fully Automated treatment station	10
fully Automated compact Powder Coating line	4
fully Automated Horizontal Powder Coating and PVDF. line	5

LIST OF MAJOR PROJECTS Ongoing and Completed BY UAAC

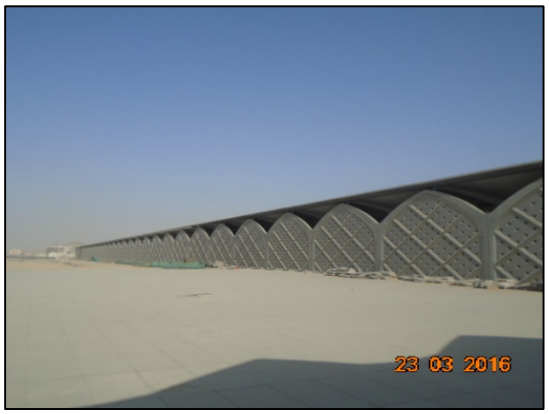
Project	Status	Scope Of Work	System Used	Contract value/SR.	Location	Type Of Work							
						Curtain wall	aluminum composite panel (ACP)	Skylight	Frameless Glass	Louvers	Screen	Doors and Windows	customized items
King Abdullah University of Science and Technology	completed	supply and install of Aluminum and Glass	Alupco/TECHNAL	203,000,000	Jeddah	92,273	67,667	5,639	N/A	2,256	N/A	13,533	N/A
Princess Nora bint Abdul Rahman University	completed	supply and install of Aluminum and Glass	SCHUCO	241,000,000	Riyadh	109,545	80,333	6,694	N/A	2,678	N/A	16,067	N/A
King Saud University	completed	supply and install of Aluminum and Glass	SCHUCO/TECHNAL	60,000,000	Jeddah	27,273	20,000	1,667	N/A	667	N/A	4,000	N/A
King Saud University	completed	supply and install of Aluminum and Glass	SCHUCO	140,000,000	Riyadh	76,364	46,667	3,889	N/A	1,556	N/A	9,333	N/A
King Saud University	completed	supply and install of Aluminum and Glass	SCHUCO/TECHNAL	40,000,000	Al ahsa	18,182	13,333	1,111	N/A	444	N/A	2,667	N/A
King Abdul Aziz Endowment	completed	supply and install of Aluminum and Glass	SCHUCO/ GUTTMAN	288,000,000	Makkah	235,636	N/A	N/A	N/A	3,200	N/A	19,200	N/A
General aviation , hajj terminal	completed	supply and install of Aluminum and Glass	SCHUCO/TECHNAL	70,000,000	Jeddah	31,818	23,333	1,944	N/A	778	N/A	4,667	N/A
Senegal Airport	completed	supply and install of Aluminum and Glass	SCHUCO	56,000,000	sinegal	30,545	4,200	N/A	230	622	N/A	1,570	N/A
private palace morocco (casablanca)	completed	supply and install of bullet proof Aluminum and Glass	SCHUCO	N/A	morocco	2780	2780	39	0	0	0	166	N/A
private palace morocco (Tanga)	completed	supply and install of bullet proof Aluminum and Glass	SCHUCO	N/A	morocco	3210	3210	55	0	0	0	85	N/A
King Abdulaziz International Airport	Ongoing	supply and install of Aluminum and Glass	SCHUCO/ HOCK	700,000,000	Jeddah	222,727	408,333	19,444	N/A	38,889	30,000	46,667	N/A
Makkah Haramain High Speed Railway Station	Ongoing	supply and install of Aluminum and Glass	SCHUCO	176,000,000	Makkah	29,333	N/A	N/A	N/A	1,956	N/A	11,733	N/A
Kindom tower	Ongoing	supply and install of Aluminum and Glass	unitized cutrain wall	462,000,000	Jeddah	192,000	N/A	N/A	N/A	5,133	N/A	30,800	N/A
Wady Qortuba	Ongoing	supply and install of Aluminum and Glass	SCHUCO	7,000,000	Riyadh	5,091	1,167	194	340	78	N/A	467	N/A
Children Hospital	Ongoing	supply and install of Aluminum and Glass	SCHUCO	6,500,000	Jeddah	460	520	181	N/A	1,200	N/A	650	N/A
King Abdullah Foundation	UAAC	supply and install of Aluminum and Glass	unitized cutrain wall SCHUCO	75,814,540	Riyadh	24,000	2,000	435	600	842	N/A	590	N/A
security building	Ongoing	supply and install of Aluminum and Glass	TECHNAL	167,159,419	Makkah	45,000	20,000	N/A	N/A	1,857	700	11,144	N/A
North project	completed	supply and install of bullet proof Aluminum and Glass	SCHUCO	N/A	Tabouk	6400	N/A	320	N/A	150	N/A	260	1300
private palace	Ongoing	supply and install of bullet proof Aluminum and Glass	SCHUCO & UAAC system	N/A	Riyadh	15,000	N/A	900	4700	4000	N/A	980	4260

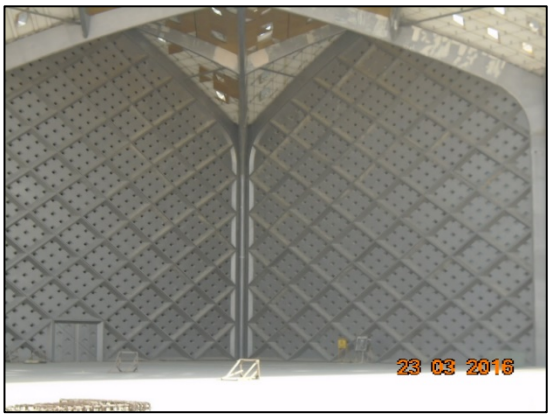
On-going Projects

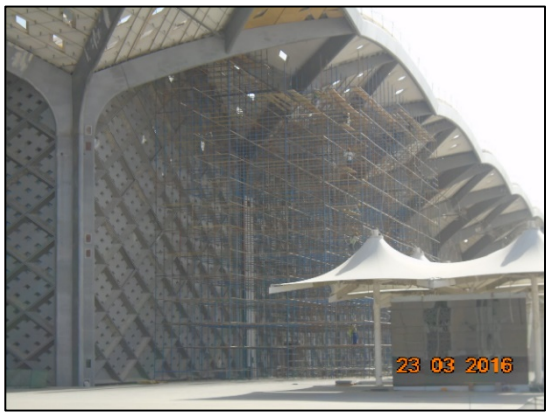
King Abdul Aziz International Airport (KAIA)

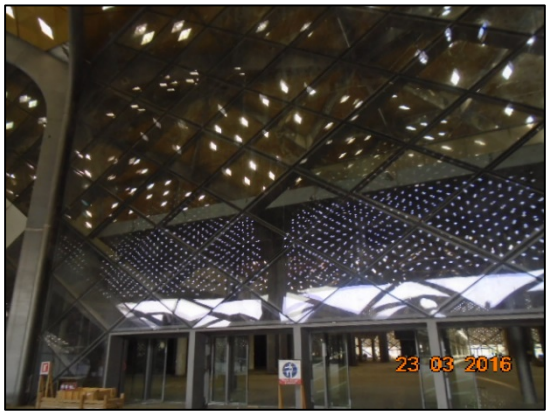


Haramain High Speed Railway station (HHR Makkah station)







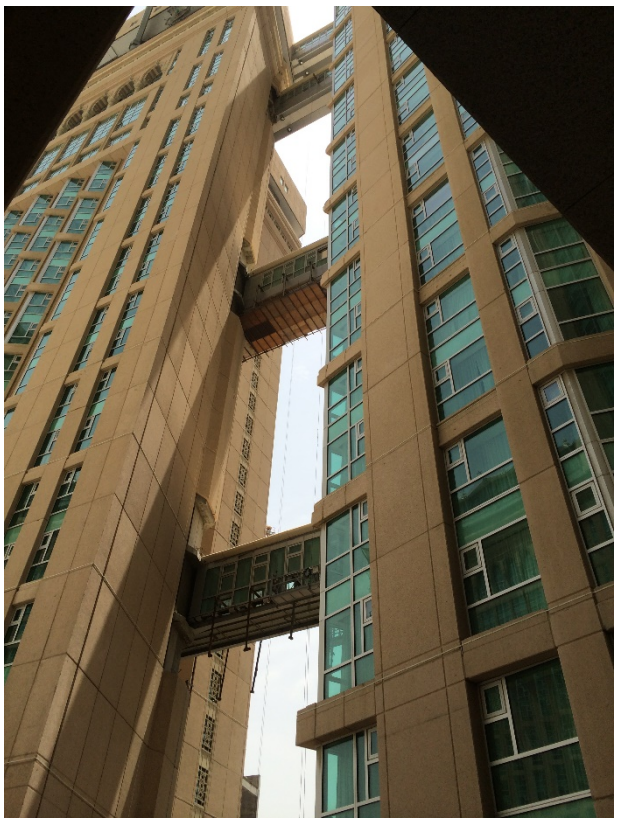


Kingdom Tower

Shamiyah Security buildings and hospital

Accomplished Projects

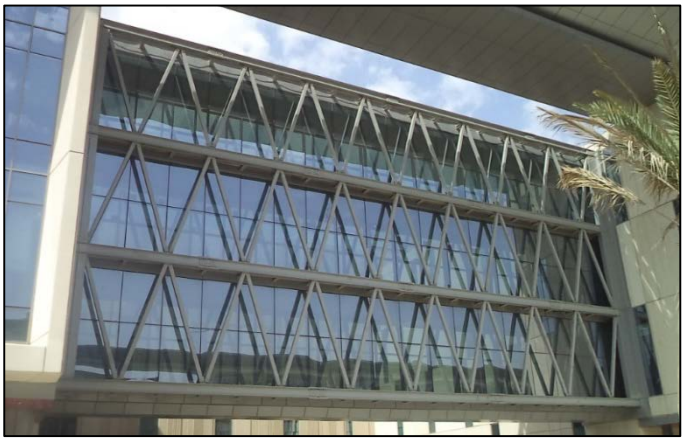
Abraj Albait Towers (DOKAAE)



Hajj Terminal

General Aviation Building

King Saud University Jeddah



King Saud university – Riyadh

King Saud University Riyadh

King Saud University Ihsaa

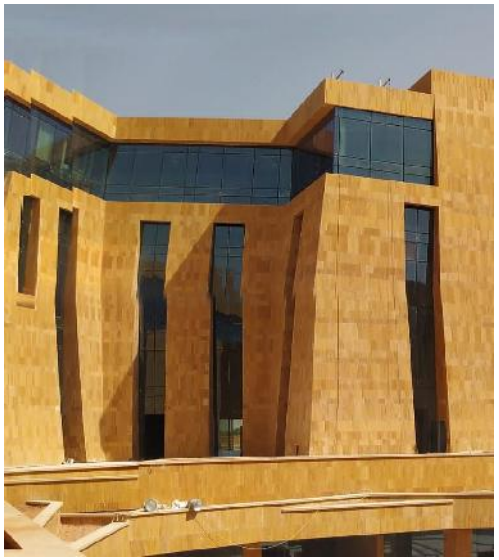
Senegal Airport

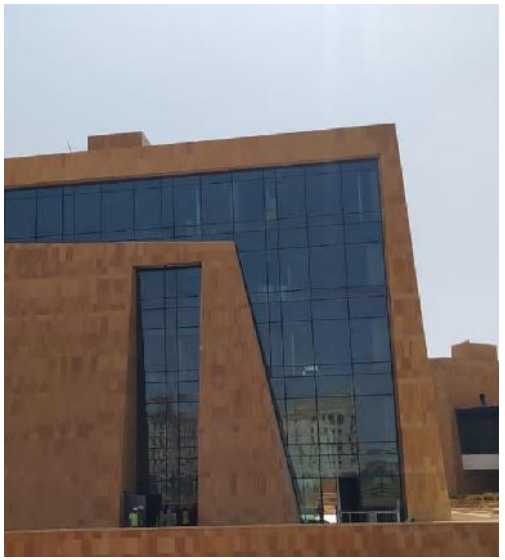

King Saud university – Riyadh

Jeddah Promenade – Jeddah

Jeddah Promenade – Jeddah

VIA Riyadh project

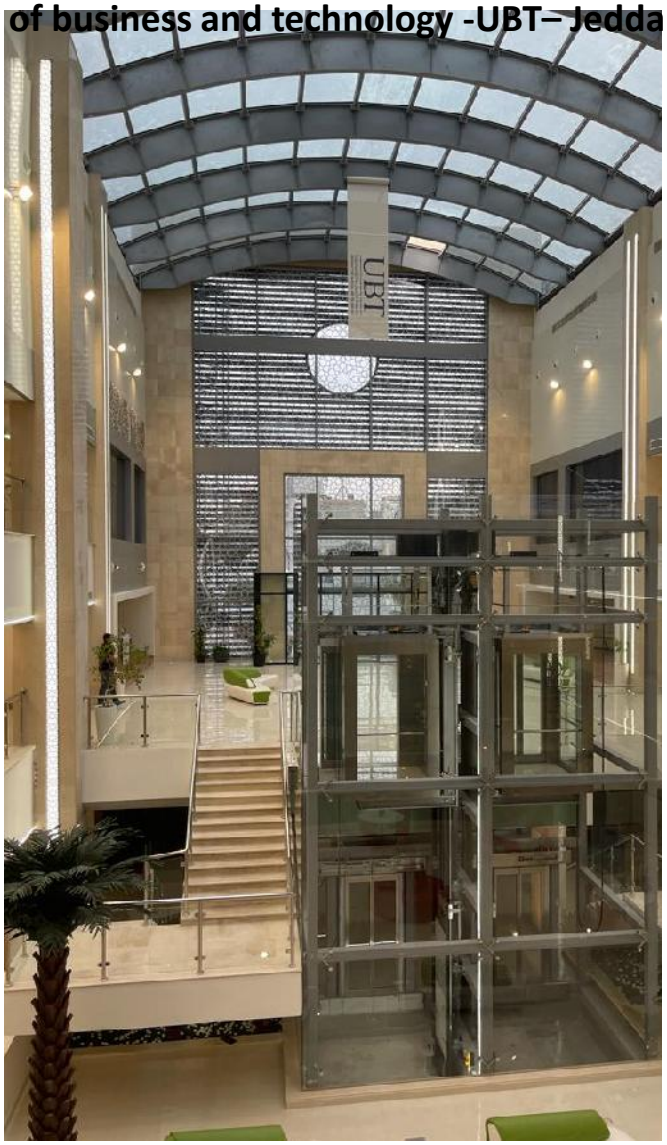




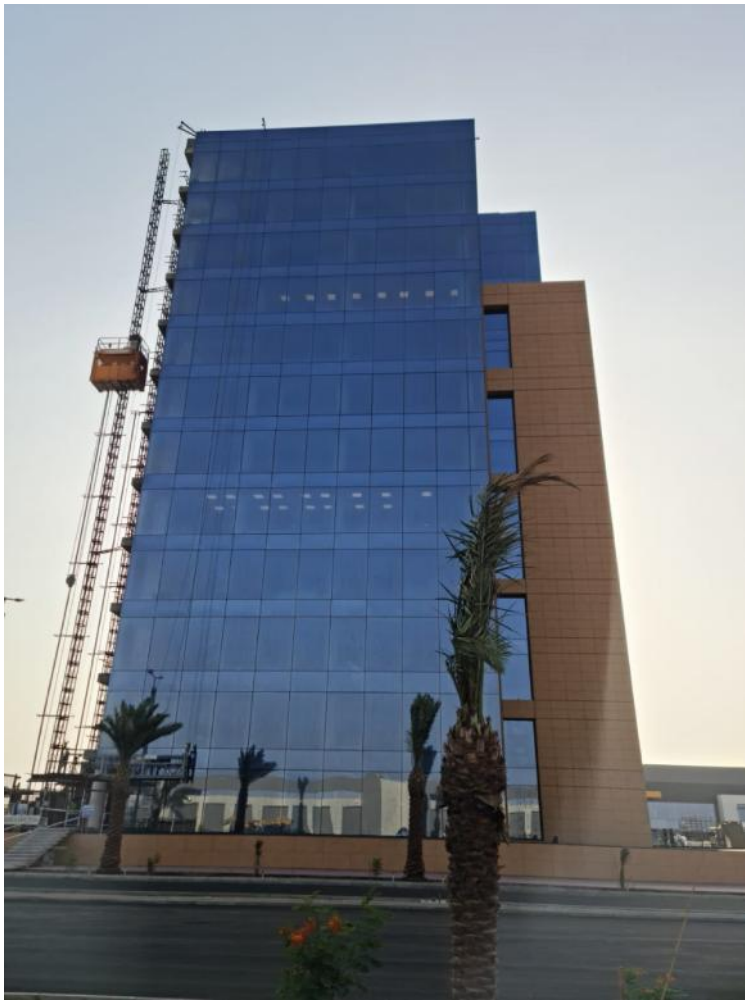
VIA Riyadh project


University of business and technology -UBT– Jeddah

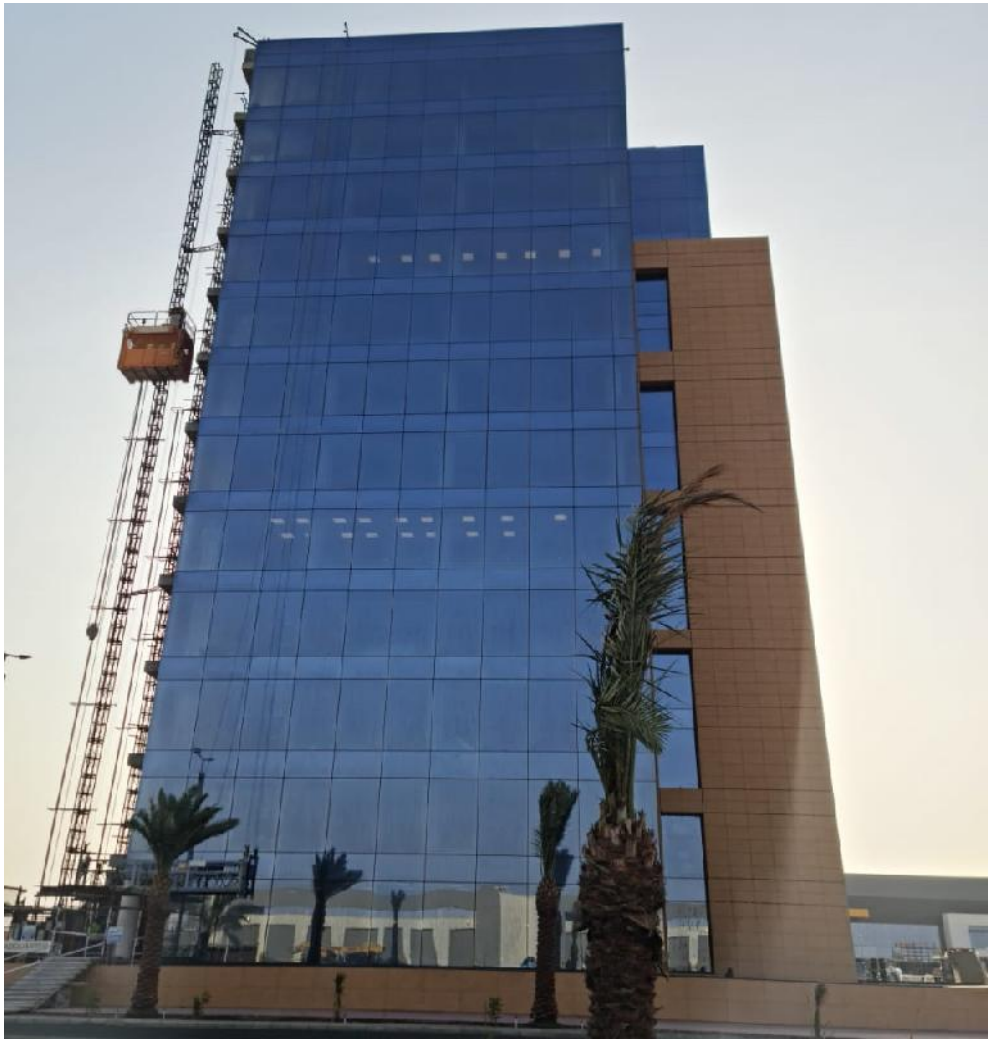
University of business and technology -UBT– Jeddah

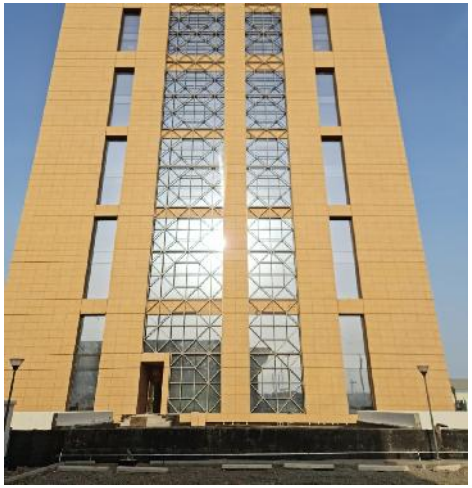


AL Zahed Business Park



AL Zahed Business Park






Red sea Project


Red sea Project

Project	Consultant	Project Managers	Contractor
KING ABDULLAH FINANCIAL DISTRICT مركز الملك عبدالله المالي	OMRANIA & ASSOCIATES, HOK	Currie & Brown	SAUDI BINLADIN GROUP Architecture & Build. Const. Div.

SUB-CONTRACTOR PREQUALIFICATION SUBMITTAL

Ref.No: KAFD | RY | RIFP | P116 | SBG | ARC | PQD | 13556 | Rev R01

Date: D D 0 9 | M M 1 2 | Y Y 1 9

X New Submittal / Resubmittal

	X	Architectural		Electrical		Civil		Furniture/Equipment	Specs. No.
		Structural		Mechanical		Interior Design		Others	Drwg. No.

Description*	Manufacturer / Supplier	No. of Catalogue/Sample	Code
Find enclosed 2 hard & 1C.D soft copy of **Pre-Qualification document for** **Stainlees Steel Cladding** **Handrail** **Blaustrade Door** **Galss Door** GLASS DOOR **Attachment:- A4 X 117**	**UAAC** **UNITED ARAB** **ALUMINUM COMPANY**	2	B

* Description: (Manufacture, Model, Type, Size, Colour, etc.)

■ Catalogue ☐ Drawing ☐ Sample ■ Certificate ☐ Calculation ■ Document

Having checked this submittal, we certify that it confirms to the requirements of the Contract Documents in all respects, except as otherwise indicated herein ( )

Material Engineer/Name & Signature :

For Project Manager (Mr.Ziad Dabbous) SAMI SHAHINE

Received by:

RECEIVED 09 DEC 2019 2:15 OMRANIA & ASSOCIATES HOK

Date

M. Asem MD

Name & Signature of Consultant

Remarks / Comments:

XPCA - REFER ATTACHED REVIEW SHEET.

A BONTAK

16/12/19

RECEIVED Mahmoud Khatifa 18 DEC 2019 SAUDI BINLADIN GROUP

17.12.19

Status

A Approved

B Approved as noted

C Revised as Noted and Resubmit

D Rejected Resubmit as Specified

HOK/Omrania JV Site Office		HOK/Omrania JV Head Office
Engineer: 16/12/19	Project Manager: C. BOZMAN DEC 17 2019	17/12/19
Date / Name & Signature	Name & Signature	Date / Name & Signature

PIF TOWER PROJECT

RIYADH

SUB-CONTRACTOR PRE-QUALIFICATION REVIEW FORM

Submittal Type:	**Pre-Qualification**	**Submittal Date: 09 Dec. 2019**
Submittal Ref. No:	**ARC 13556**	**Revision: R01**
Submittal Title:	**Pre-Qualification Documents for Stainless Steel Cladding, Handrail, Balustrade, Door & Glass Door – United Arab Aluminum Company**	

Review / Comments:

Architecture Comments:

1. United Arab Aluminum Company can be accepted for the following Works subject to fully compliance with Project Specification and site mock-up for the Stainless Steel Column Cladding:-
   - 1.1 Stainless Steel Column Cladding
   - 1.2 Steel Handrail
   - 1.3 Glass Balustrade and Stainless Steel fascia
   - 1.4 Fire Rated Glass Doors and Frameless Glass Doors.
2. Work experience in similar capacity deem appropriate.
3. Renewed ISO Certificates incorporated in this submittal.

Signature: BOMTAL	**Date:** 16 DEC. 2019

	SUBMITTAL FORM NOR-VLA-004	**Project Name:** North Complex - Tabuk

Contractor	**SBG**
Att. Mr.	**Mahmoud Fritikh**

Consultant	**Saudi Diyar**

Type of Submittal:

☐	System " SYS"	☐	Drawings "DWG"	☐	Documents " DOC"	☒	Material " MAT"

Submittal is issued for:

☒	Approval	☐	Information	☐	Others

Subject:

Bullet Proof Glass (BR7 NS)

Details:

1 **Sample of Bullet Proof Glass BR7 NS**

Sub-Contr. Ref.	**Main Contr.**
Replied to Sub-Contr.	**Material dept. receiving**

Prepared By:	**Reviewed By:**	**Received By:**
Name: Abdullah Kaloti	Name: Kenan Ramadan	Name:
Signature :	Signature	Signature
Date 15th April 2018	Date : 15 April 2018	Date

DIYAR
Saudi Diyar Consultants

المملكة العربية السعودية
الهيئة العامة للطيران المدني

DIYAR
مجموعة سعودي بن لادن السعودية
SAUDI BINLADIN GROUP
16 APR 2018
RECEIVED

Transmittal to SDC (Material)

■ Submittal
☐ Resubmittal

A.G

Date	Project Code		Project Title	Trans. No.	Department			
16/4/2018	SDC	TB-1750-1A1B01	North Project	TB1750-MAT-AR-23 REV.01	AR	CE/SE	ME	EE
	Contr.	P-2000	Tabuk		■			

To	From
■ Resident Engineer ☐ Head Office ☐ Others	SBG ABCD

Contractor Use

Item No.	Division	Item Description (Name, Type, Size, Capacity, Specific Use, Etc.)	Manufacturer or Designer	Dwg. No., Catalog No. Brochure No., Others	No. of Copies
1	ABC	**1A1B01 : Technical submittal / Material submittal**			
	a)	Sample of Bullet proof unit (Alum & Glass)	**M/s. United Arab Aluminium co.**	Technical data sheet	3
				CD	1
				Sample	1

Submitted by			Enclosures: sheet+ CD+SAMPLE
Engr. Ashrif Metwoly	Technical office manager		Items: 3
For/ Mostafa Amf		Mostafa Amf	
Name	Title	Signature	

Saudi Diyar Use

Item #	1									
Code	2									
Reviewed By	A.G									

Action Code
1. No Exceptions Taken
2. Make Corrections as Noted
3. Amend and Resubmit
4. Rejected

See Remarks – Warranty 10 years for glass to be submitted For our record as per specs.

Remarks:
a) Installation shall only proceed when Action Code is 1 or 2.
b) Action Code 3, shall be resubmitted within time limit set in the contract.
c) Review does not relieved the Contractor from Responsibilty of Compliance with all requirements of contract documents.

Special Instructions – Bullet proof Alum. profile Technical data+detail to be submitted For approval!
1- Bullet proof glass sample BR7 is accepted For Fixed glass panels only!
(i.e 73mm Thick glass BR7 From Glass shield/Guardian accepted For fixed panel only).
2- For operable and sliding doors and window contractor to submit 51.6mm thick BR7 glass with relevant technical data sheets and sample For our approval.
3- Approval is strictly subject to approval report received From Royal Guard!

Reviewed by:			Date
AMIR EL GANIN	Pr. Sr. Architect		18/4/2018.
Name	Title	Signature	

Signed off by:			Date
			18/4/2018
Name : Ameen Diab	Title : Resident Engr.	Signature	

F-CS07/B
Rec. 17.4.18
12:00

DIYAR
Saudi Diyar Consultants

RECEIVED
28 MAR 2018

أزميل AZMEEL مقاولات Contracting

Transmittal To SDC (PRE-QUALIFICATIONS)

☒ Submittal
☐ Resubmittal

Date	Project Code		Project Title	Trans. No.	Department			
20-Mar-2018	SDC	TB-1751	SHARMA COMPLEX	TR-0405	AR	CE/SE	ME	EE
	Contr.	TB-3374			■			

To	From
☒ Resident Engineer ☐ Head Office ☐ Others	AZMEEL CONTRACTING

Contractor Use

Item No.	Division	Item Description (Name, Type, Size, Capacity, Specific Use, Etc.)	Manufacturer or Designer	Dwg. No., Catalog No. Brochure No., Others	No. of Copies
1	A	PRE-QUALIFICATION DOCUMENTS OF UNITED ARAB ALUMINUM COMPANY	UNITED ARAB ALUMINUM COMPANY		

أزميل AZMEEL مقاولات Contracting شركة أزميل للمقاولات
Project TB3374

Submitted by			Enclosures:	3 Hard Copies of Pre-qualifications
Ali Seblani	Project manager	20-3-18	Items:	3
Name	Title	Signature		

DIYAR
21 MAR 2018
Received

Saudi Diyar Use

Item #	1							
Code	2							
Reviewed By								

Action Code
1. No Exceptions Taken
2. Make Corrections as Noted
3. Amend and Resubmit
4. Rejected
See Remarks

Remarks:
a) Installation shall only proceed when Action Code is 1 or 2.
b) Action Code 3, shall be resubmitted within time limit set in the contract.
c) Review does not relieved the Contractor from Responsibilty of Compliance with all requirements of contract documents.

Special Instructions

* United Arab Aluminum company pre-qualification is accepted subject to comply with all the technical notes in the project's specification.
* Manufacturer to provide a material submittal for both "schueco and Alupco" sections according to the issued design arch. drawings - gluss - sealant and EPDM - accessories with samples « Corner samples 50*50 » prior to submit shop drawing details. * Contractor to determine the manufaturer's scope of work on the material submitted

Reviewed by:			Date
Ashraf Dolsan	Sr. Arch		27-03-2018
Name	Title	Signature	

Signed off by:			Date
B. Khatib	RE		28.03.18
Name	Title	Signature	

[redacted]	**SUBMITTAL FORM** **NOR-VLA-040** **Rev 00**	**Project Name:** **North Project**

Contractor	**SBG**	**Consultant**	**Saudi Diyar**
Att. Mr.	**Mahmoud Fritikh**		

Type of Submittal:

☐	**System " SYS"**	☐	**Drawings "DWG"**	☐	**Documents " DOC"**	☒	**Material " MAT"**

Submittal is issued for:

☒	Approval	☐	Information	☐	Others

Subject:

Bullet Proof Glass

Details:

Sample of Bullet Proof BR6-NS Glass
(Data Sheet + CD)

Sub-Contr. Ref.	**Main Contr.**
Replied to Sub-Contr.	**Material dept. receiving**

Prepared By:	**Reviewed By:**	**Received By:**
Name: Abdullah Kaloti	Name: Eng. Kenan Ramadan	Name:
Signature :	Signature	Signature
Date: 13 May 2018	Date : 13 May 2018	Date

DIYAR
Saudi Diyar Consultants

Transmittal to SDC (Material)

■ Submittal
☐ Resubmittal

DIYAR
SAUDI BINLADIN GROUP
13 MAY 2018
RECEIVED

A.B

Date	Project Code		Project Title	Trans. No.	Department			
13/5/2018	SDC	TB-1750-1A1B01	North Project	TB1750-MAT-AR-85	AR	CE/SE	ME	EE
	Contr.	P-2000	Tabuk		■			

To	From
■ Resident Engineer ☐ Head Office ☐ Others	SBG ABCD

Contractor Use

Item No.	Division	Item Description (Name, Type, Size, Capacity, Specific Use, Etc.)	Manufacturer or Designer	Dwg. No., Catalog No. Brochure No., Others	No. of Copies
1	ABC	1A1B01 : Technical submittal /Material submittal			
	a)	Bullet proof BR6-NS Glass	M/s. UAAC	Technical Data Sheet	3
			Glass Shield	CD	1
				Samples	1

Submitted by

Engr. Ashref Metwoly	Technical office manager		Sample
Name	Title	Signature	Enclosures: Data Sheet + CD
			Items: 3

Saudi Diyar Use

Item #	1									
Code	2									
Reviewed By	AB									

Action Code
1. No Exceptions Taken
2. Make Corrections as Noted
3. Amend and Resubmit
4. Rejected

See Remarks

Remarks:
a) Installation shall only proceed when Action Code is 1 or 2.
b) Action Code 3, shall be resubmitted within time limit set in the contract.
c) Review does not relieved the Contractor from Responsibilty of Compliance with all requirements of contract documents.

Special Instructions

- Follow the remarks on attached site staff Comments.

Reviewed by:			Date
Ahmad B.A Moorei	Pr. sr. Arch	AB	15-5-2018
Name	Title	Signature	

Signed off by:			Date
Name : Ameen Diab	Title : Resident Engr.	Signature	15-5-2018

F-CS07/B

Approval on UAAC Prequalification at Kingdom Tower Project

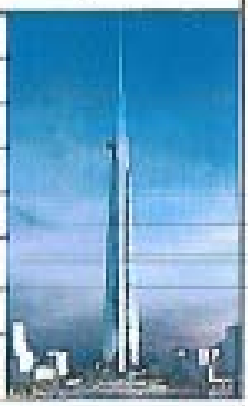
THE KINGDOM TOWER, JEDDAH

Document Submittal Review Sheet

Project No. 511001 | *Jeddah Economic Company* | *Date : 09-Dec-2014*

SECTION A - Submittal Details :

Submittal Number :	P1227-DOC-CPQ-AE-00055 Rev.5
Submittal Title :	Prequalification of UAAC Company
Submittal Category :	Pre-Qualification
Issuer :	Dar Al-Handasah (Shair and Partners)
Receipient :	Saudi Bin Ladin Group
B.O.Q. Item(s) :	**Specs :** General
Drawing(s) Reference:	KT 01 300-013 **Discipline:** AE - Architectural
Area of Application :	Curtain Wall **Action Required:** For Approval



SECTION B - Submittal History :

Rev	Description	Trans. No	Submission Date	Reply Date	Status
05	Prequalification of UAAC Company	01084	08-Nov-2014	08-Dec-2014	Approved As Noted
04	Prequalification of UAAC Company	1012	20-Oct-2014	23-Oct-2014	Cancelled
03	Prequalification of UAAC Company	0943	25-Sep-2014	12-Oct-2014	Approved As Noted
02	Prequalification of UAAC Company	0827	25-Aug-2014	29-Sep-2014	Revise & Resubmit
01	Prequalification of UAAC Company	0802	04-Aug-2014	14-Aug-2014	Revise & Resubmit
00	Prequalification of UAAC Company	0420	18-Dec-2013	11-Jan-2014	Closed

SECTION C - Submittal Review / Comments :

Refer Engineer's comments in the enclosed attachment

RECEIVED 09 DEC 2014

SECTION D - Reviewer Action Code :

- [ ] A - Approved
- [ ] C - Revise and Resubmit
- [x] B - Approved As Noted
- [ ] D - Rejected

SECTION E - Engineer Representative Approval For Submission :

Name : Jamal Sabr **Position :** Assistant Project Manager **Signature:** **Date :** 09-Dec-2014

Approval shall not relieve the Contractor of its obligation and liabilities under the Contract nor constitute authorization of any change to Contract Documents and therefore shall not imply any recognition whatsoever of additional time or cost to the contract.

GUARDIAN® GLASS

See what's possible™

SELECT ADVANTAGE CERTIFIED PROCESSOR

CERTIFICATE

Saudi Guardian International Float Glass Co Ltd, Jubail Industial City Al-Jubail, KSA, is pleased to confirm that the processor

UNITED ARAB ALUMINIUM CO

GLASS FACTORY
BAHRA AREA Jeddah, Makkah al Mukarramah .
Saudi Arabia

United Arab Aluminium Company
شركة الألمنيوم العربية المتحدة

has demonstrated on 7/5/22 the capability to successfully process and is certified to process the following Guardian glass product

SunGuard SN, DS, HP and ClimaGuard Products

for thicknesses 4,5,6,8, and 10

In Terms of Mechanical Treatment, Heat Treatment and Insulated Glass.

It is the sole responsibility of the processor to adequately inspect the glass before each step of fabrication and prior to installation. Failure to apply all professional standards, customary instructions and guidelines will automatically void any warranty. The processor has the full responsibility for the quality of the final product. By this certificate Guardian is not granting any warranty regarding the processor's continuing capability to adequately process Guardian's products.

Issued: 7/5/22

SAUDI GUARDIAN INTERNATIONAL FLOAT GLASS CO. LTD.
P.O. BOX 11963 AL-JUBAIL 31961
KINGDOM OF SAUDI ARABIA
PHONE: +966 13 350 3733

Guardian's representative:

Haedar Al Abdulbagy

Digitally signed by Haidar Alabdalbagy
Date: 2022.07.05 12:22:50 +03'00'

Expiration date: 1/5/23

Annex 1: Processing Guideline

The product(s) indicated above is (are) sold subject to Guardian's standard terms and conditions of sale and any applicable written warranties. It is the responsibility of the purchaser to confirm that the products are suitable for their intended application. Please contact your local Guardian representative should you require any additional information as to handling and fabrication of the products and for the most current product information.

HA220705

IGMA INSULATING GLASS MANUFACTURERS ALLIANCE

BSI FS 548103

MEMBER

THIS CERTIFIES THAT

UNITED ARAB ALUMINIUM COMPANY

IS A MEMBER OF THE

INSULATING GLASS MANUFACTURERS ALLIANCE
FOR THE YEAR ENDING DECEMBER 31, 2015

Mark Hutchinson

EXECUTIVE DIRECTOR

PRESIDENT

IGMA certificate

Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

BAHRA INDUSTRIAL COMPLEX- MAKKAH/JEDDAH EXPRESS WAY, P.O. BOX 27299, JEDDAH 21941, SAUDI ARABIA

This is a multi-site certificate, additional site(s) are listed on the next page(s)

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015

Scope of certification

DESIGN, FABRICATION AND SUPPLY OF ALUMINIUM AND GLAZING SYSTEMS

Original cycle start date:	**14-07-2021**
Expiry date of previous cycle:	**NA**
Certification / Recertification Audit date:	**14-02-2021**
Certification / Recertification cycle start date:	**14-07-2021**
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	**13-07-2022**

Certificate No.: **SA002633** Version: 1 Issue Date: **14-07-2021**

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local office: Bureau Veritas Company, Al Raja Tower, 6th Floor, King Abdulaziz Road, P.O. Box 20189, Al-Khobar 31952, Kingdom of Saudi Arabia.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +966 13 8821071

UNITED ARAB ALUMINIUM COMPANY (UAAC)

ISO 9001:2015

Scope of certification

Site Name/Location	Site Address	Site Scope
UNITED ARAB ALUMINIUM COMPANY (UAAC)	BAHRA INDUSTRIAL COMPLEX-MAKKAH/JEDDAH EXPRESS WAY, P.O. BOX 27299, JEDDAH 21941, SAUDI ARABIA	DESIGN, FABRICATION AND SUPPLY OF ALUMINIUM AND GLAZING SYSTEMS
HO:-JOPETWIL INDUSTRIAL COMPANY (JIC) – SWITCHGEAR DIVISION	M-2, W-3, INDUSTRIAL AREA, MUSSAFAH, P.O. BOX: 46089, ABU DHABI ., UNITED ARAB EMIRATES	PROJECT MANAGEMENT, DESIGN, DETAILED ENGINEERING, PROCUREMENT, MANUFACTURING, ASSEMBLY, TESTING, COMMISSIONING, SYSTEM INTEGRATION, TRAINING, MAINTENANCE, SERVICING AND AFTER SALES SERVICE OF SWITCHGEAR, INTELLIGENT MOTOR CONTROL CENTERS (IMCC), PROCESS CONTROL AND INDUSTRIAL AUTOMATION SYSTEMS, SCADA, ELECTRICAL CONTROL AND MONITORING SYSTEMS, POWER MANAGEMENT SYSTEMS, RELAY AND INSTRUMENT CONTROL PANELS

Certificate No.: SA002633 **Version:** 1 **Issue Date:** 14-07-2021

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local office: Bureau Veritas Company, Al Raja Tower, 6th Floor, King Abdulaziz Road, P.O. Box 20189, Al-Khobar 31952, Kingdom of Saudi Arabia.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +966 13 8821071

UNITED ARAB ALUMINIUM COMPANY (UAAC)

ISO 9001:2015

Scope of certification

Site Name/Location	Site Address	Site Scope
JOPETWIL INDUSTRIAL COMPANY (JIC) – SWITCHGEAR DIVISION	ICAD - II, P.O BOX 91791, ABU DHABI ., UNITED ARAB EMIRATES	PROJECT MANAGEMENT, DESIGN, DETAILED ENGINEERING, PROCUREMENT, MANUFACTURING, ASSEMBLY, TESTING, COMMISSIONING, SYSTEM INTEGRATION, TRAINING, MAINTENANCE, SERVICING AND AFTER SALES SERVICE OF SWITCHGEAR, INTELLIGENT MOTOR CONTROL CENTERS (IMCC), PROCESS CONTROL & INDUSTRIAL AUTOMATION SYSTEMS, SCADA, ELECTRICAL CONTROL AND MONITORING SYSTEMS, POWER MANAGEMENT SYSTEMS, RELAY AND INSTRUMENT CONTROL PANELS

Certificate No.: **SA002633** **Version:** **1** **Issue Date:** **14-07-2021**

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local office: Bureau Veritas Company, Al Raja Tower, 6th Floor, King Abdulaziz Road, P.O. Box 20189, Al-Khobar 31952, Kingdom of Saudi Arabia.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +966 13 8821071

Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

BAHRA INDUSTRIAL COMPLEX- MAKKAH/JEDDAH EXPRESS WAY, P.O. BOX 27299, JEDDAH 21941, SAUDI ARABIA

This is a multi-site certificate, additional site(s) are listed on the next page(s)

Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 45001:2018

Scope of certification

DESIGN, FABRICATION AND SUPPLY OF ALUMINIUM AND GLAZING SYSTEMS

Original cycle start date:	14-07-2021
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	14-02-2021
Certification / Recertification cycle start date:	14-07-2021
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	13-07-2022

Certificate No.: SA002635 Version: 1 Issue Date: 14-07-2021

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local office: Bureau Veritas Company, Al Raja Tower, 6th Floor, King Abdulaziz Road, P.O. Box 20189, Al-Khobar 31952, Kingdom of Saudi Arabia.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +966 13 8821071

Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

ISO 45001:2018

Scope of certification

Site Name/Location	Site Address	Site Scope
UNITED ARAB ALUMINUM COMPANY	BAHRA INDUSTRIAL COMPLEX-MAKKAH/JEDDAH EXPRESS WAY, P.O. BOX 27299, JEDDAH 21941, SAUDI ARABIA	DESIGN, FABRICATION AND SUPPLY OF ALUMINIUM AND GLAZING SYSTEMS
HO:-JOPETWIL INDUSTRIAL COMPANY (JIC) – SWITCHGEAR DIVISION	M-2, W-3, INDUSTRIAL AREA, MUSSAFAH, P.O. BOX: 46089, ABU DHABI ., UNITED ARAB EMIRATES	PROJECT MANAGEMENT, DESIGN, DETAILED ENGINEERING, PROCUREMENT, MANUFACTURING, ASSEMBLY, TESTING, COMMISSIONING, SYSTEM INTEGRATION, TRAINING, MAINTENANCE, SERVICING AND AFTER SALES SERVICE OF SWITCHGEAR, INTELLIGENT MOTOR CONTROL CENTERS (IMCC), PROCESS CONTROL AND INDUSTRIAL AUTOMATION SYSTEMS, SCADA, ELECTRICAL CONTROL AND MONITORING SYSTEMS, POWER MANAGEMENT SYSTEMS, RELAY AND INSTRUMENT CONTROL PANELS

Certificate No.: SA002635 **Version:** 1 **Issue Date:** 14-07-2021

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

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BUREAU VERITAS

Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

ISO 45001:2018

Scope of certification

Site Name/Location	Site Address	Site Scope
JOPETWIL INDUSTRIAL COMPANY (JIC) – SWITCHGEAR DIVISION	ICAD - II, P.O BOX 91791, ABU DHABI ., UNITED ARAB EMIRATES	PROJECT MANAGEMENT, DESIGN, DETAILED ENGINEERING, PROCUREMENT, MANUFACTURING, ASSEMBLY, TESTING, COMMISSIONING, SYSTEM INTEGRATION, TRAINING, MAINTENANCE, SERVICING AND AFTER SALES SERVICE OF SWITCHGEAR, INTELLIGENT MOTOR CONTROL CENTERS (IMCC), PROCESS CONTROL & INDUSTRIAL AUTOMATION SYSTEMS, SCADA, ELECTRICAL CONTROL AND MONITORING SYSTEMS, POWER MANAGEMENT SYSTEMS, RELAY AND INSTRUMENT CONTROL PANELS

Certificate No.: SA002635 **Version:** 1 **Issue Date:** 14-07-2021

UKAS MANAGEMENT SYSTEMS

0008

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BUREAU VERITAS

Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

BAHRA INDUSTRIAL COMPLEX- MAKKAH/JEDDAH EXPRESS WAY, P.O. BOX 27299, JEDDAH 21941, SAUDI ARABIA

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Bureau Veritas Certification Holding SAS – UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001:2015

Scope of certification

DESIGN, FABRICATION AND SUPPLY OF ALUMINIUM AND GLAZING SYSTEMS

Original cycle start date:	14-07-2021
Expiry date of previous cycle:	NA
Certification / Recertification Audit date:	14-02-2021
Certification / Recertification cycle start date:	14-07-2021
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	13-07-2022

Certificate No.: SA002634 Version: 1 Issue Date: 14-07-2021

UKAS MANAGEMENT SYSTEMS

0008

Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom

Local office: Bureau Veritas Company, Al Raja Tower, 6th Floor, King Abdulaziz Road, P.O. Box 20189, Al-Khobar 31952, Kingdom of Saudi Arabia.

Further clarifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +966 13 8821071

Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

ISO 14001:2015

Scope of certification

Site Name/Location	Site Address	Site Scope
UNITED ARAB ALUMINUM COMPANY	BAHRA INDUSTRIAL COMPLEX-MAKKAH/JEDDAH EXPRESS WAY, P.O. BOX 27299, JEDDAH 21941, SAUDI ARABIA	DESIGN, FABRICATION AND SUPPLY OF ALUMINIUM AND GLAZING SYSTEMS
HO:-JOPETWIL INDUSTRIAL COMPANY (JIC) – SWITCHGEAR DIVISION	M-2, W-3, INDUSTRIAL AREA, MUSSAFAH, P.O. BOX: 46089, ABU DHABI ., UNITED ARAB EMIRATES	PROJECT MANAGEMENT, DESIGN, DETAILED ENGINEERING, PROCUREMENT, MANUFACTURING, ASSEMBLY, TESTING, COMMISSIONING, SYSTEM INTEGRATION, TRAINING, MAINTENANCE, SERVICING AND AFTER SALES SERVICE OF SWITCHGEAR, INTELLIGENT MOTOR CONTROL CENTERS (IMCC), PROCESS CONTROL AND INDUSTRIAL AUTOMATION SYSTEMS, SCADA, ELECTRICAL CONTROL AND MONITORING SYSTEMS, POWER MANAGEMENT SYSTEMS, RELAY AND INSTRUMENT CONTROL PANELS

Certificate No.: **SA002634** **Version:** **1** **Issue Date:** **14-07-2021**

UKAS MANAGEMENT SYSTEMS

0008

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Bureau Veritas Certification

UNITED ARAB ALUMINIUM COMPANY (UAAC)

ISO 14001:2015

Scope of certification

Site Name/Location	Site Address	Site Scope
JOPETWIL INDUSTRIAL COMPANY (JIC) – SWITCHGEAR DIVISION	ICAD - II, P.O BOX 91791, ABU DHABI ., UNITED ARAB EMIRATES	PROJECT MANAGEMENT, DESIGN, DETAILED ENGINEERING, PROCUREMENT, MANUFACTURING, ASSEMBLY, TESTING, COMMISSIONING, SYSTEM INTEGRATION, TRAINING, MAINTENANCE, SERVICING AND AFTER SALES SERVICE OF SWITCHGEAR, INTELLIGENT MOTOR CONTROL CENTERS (IMCC), PROCESS CONTROL & INDUSTRIAL AUTOMATION SYSTEMS, SCADA, ELECTRICAL CONTROL AND MONITORING SYSTEMS, POWER MANAGEMENT SYSTEMS, RELAY AND INSTRUMENT CONTROL PANELS

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Dow Corning Quality Bond Certificate

Dow Corning® Quality Bond

CERTIFICATE

Dow Corning is proud to name

UNITED ARAB ALUMINIUM COMPANY

Jeddah, Saudi Arabia

as a member of Quality Bond™

for Structural Glazing & Insulating Glazing Applications
with Dow Corning® Sealants

Signed

Customer

who are following the commitments and standards of quality and best practice as defined in Quality Bond™

On behalf of Dow Corning

Valid from September 2014

Valid to November 2015

DOW CORNING

62-1357I-01

5th February 2014

Ref.: TME/MD/05022014/01

M/s UNITED ARAB ALUMINIUM COMPANY
P.O. BOX 27299 Makkah – Bahra 211941
Kingdom of Saudi Arabia

CERTIFICATION

SUBJECT: M/S UNITED ARAB ALUMINIUM COMPANY AS AUTHORIZED FABRICATOR IN KSA

To Whom It May Concern,

As **TECHNAL MIDDLE EAST**, we are pleased to confirm the following points:

M/S UNITED ARAB ALUMINIUM CO., is one of the best approved Authorized Fabricators, doing the installation of **TECHNAL®** systems in the Kingdom of Saudi Arabia.

As both, **M/S UNITED ARAB ALUMINIUM CO.** and **TECHNAL MIDDLE EAST**, have mutual interests in the construction of the significant projects in the above mentioned Territory, and as such, **M/S UNITED ARAB ALUMINIUM CO.** is collaborating with **TECHNAL**, in all the technical/aluminium engineering approach in view to offer the best in terms of products, fabrication and installation.

TECHNAL MIDDLE EAST ensures full technical and engineering support to **M/S UNITED ARAB ALUMINIUM CO.** and also guarantee that the installation for the **TECHNAL ®** systems that are needed and required, shall be carried out as per the required **TECHNAL®** standards.

We, at **TME**, shall remain at your disposal and trust to have the privilege of satisfying and meeting the requirements of all concerned.

Yours faithfully,
For TECHNAL MIDDLE EAST WLL

Jean-Marc LUVISUTTO
Managing Director

TECHNAL MIDDLE EAST W.L.L.

Technal Middle East W.L.L.
P. O. Box : 21848, Manama, Kingdom of Bahrain
Tel. : (00973) 17225777
Fax Administration : (00973) 17229299
Fax Commercial : (00973) 17217799
e-mail : technal@technal.com.bh
CR : 45755

تكنـــال الشـــرق الأوســـط ذ.م.م.
ص. ب : ٢١٨٤٨ ـ المنامة ـ مملكة البحرين
تلـيـفـــــون : ١٧٢٢٥٧٧٧ (٠٠٩٧٣)
فـاكـس الإدارة : ١٧٢٢٩٢٩٩ (٠٠٩٧٣)
فاكس المبيعات : ١٧٢١٧٧٩٩ (٠٠٩٧٣)
e-mail : technal@technal.com.bh
س. ت : ٤٥٧٥٥

MEMBERSHIP CERTIFICATION

This is to certify that

UNITED ARAB ALUMINIUM COMPANY (UAAC)

P.O. BOX 27299, MAKKAH, BAHRA 21941, SAUDI ARABIA

Membership Ref.: A021

is a member of the Quali Middle East Association and is a signatory to the policies and procedures related to the membership of the Association.

Period of validity of the certificate: until 31.12.2021

Dubai, 30 December 2020

QUALI MIDDLE EAST ASSOCIATION

Nasir Fahmeed
General Secretary

Mailing address: Quali Middle East Association
c/o Dubai Association Centre, Office 207 (16), Level 2
Building 2 at One Central, Dubai World Trade Centre
Dubai, United Arab Emirates

P.O. Box 23070, Dubai-UAE
Phone: +971 4 516 3052-3
E-Mail: admin@qualimiddleeast.com
Internet: www.qualimiddleeast.com

QMEA License No: 225591 issued by Dubai Chamber of Commerce & Industry

CERTIFICATE

for a **COATING APPLICATOR**

SEASIDE

hereby authorises

UNITED ARAB ALUMINIUM COMPANY (UAAC)
Bahra Industrial Zone
P.O.Box 27299
21946 Jeddah
Saudi Arabia

to use the quality label in conformity with the
QUALICOAT 2021 Specifications, applicable from 1 January 2021

Licence No.:	**3004**
Date of Granting:	**16.06.2011**
Valid until:	**31.12.2021**

Zurich, 1 January 2021

QUALICOAT

Mohammed C. Panam
President

Sue C. C. Paredi
Managing Director

EXPERT

somfy

EXPERT SOMFY DIPLOMA

Somfy certifies that

UAAC

is a qualified "Expert Somfy" installer for the year **2017**

This diploma is valid for one year and renewable.

Jack Moussa
BU Manager

Diploma ref. KSA16/2017

somfy Building happiness

AGC Obeikan

We are pleased to declare that company

United Arab Aluminium Company

UNITED ARAB ALUMINIUM COMPANY

is able to process following products in terms of pre-processing and heat treatment

Sunlux, iplus Solid, iplus AS, Stopray Smart Stopray Vision, Titanium

Hamza Al Naimat
Technical Support Manager

Yanbu, Saudi Arabia, August 2021

Valid until August 2022

It is sole responsibility of the processor to adequately inspect heat treatable coated glass before each step of fabrication and prior installation. Failure to apply professional standards, customary and processing instructions available on www.agc-yourglass.com and www.agc-obeikanglass.com.sa will automatically void any warranty related to heat treatable coated glass of AGC Obeikan. The processor has full responsibility for the final product.

Technical Certification Checklist

Section 1
GENERAL INFORMATION

Company Information

COMPANY UNITED ARAB AUMINIUM COMPANY "UAAC"		CERTIFICATION DATE 21 & 22 MAY 2017
ADDRESS PO BOX 27299 MAKKAH-BAHRA 21941		
CITY JEDDAH		COUNTRY SAUDI ARABIA
PHONE +966 12 591 4843	FAX +966 12 591 5338	WEBSITE www.uaac-sa.com

Customer Representatives

Key Contact	Title	Email
Eng. E.K. Murthy	Glass Factory manager	gpm@uaac-sa.com
Jebreel Clemente Gatbonton	Quality Control Manager	qc@uaac-sa.com
Amer Ba-Amer	QC Manager in Glass Factory	Amer.saleh@uaac-sa.com
Bokhari	Quality Control Engineer	

Guardian Representatives

	Phone
FIELD SALES BASSAM ALLAF	+966 55 879 9558
COMMERCIAL SALES AHMAD ABU HASHEM	+966 55 549 8360
TECHNICAL SERVICES EXECUTIVE MAEN MUSAMIH	+966 50 162 2623

Certification Information

	Visit Type	Comments
❑	Pre-Cert Phone Screen	
❑	Pre-Audit Visit	
☑	Re-Certification Audit	
❑	Follow-up Audit	

Products Used in Certification

	SG Series	Products Used
❑	Solar	
☑	High Performance	Neutral Plus 50
❑	Super Neutral	

Required Corrections Prior to Awarding Certification
1. **Traceability of Guardian Tag:** The system needs to be developed and to be implemented for the traceability of Guardian Tags.
2. Detection of coating: detection of the coating surface should be done at every and each stage of processing (Cutting, Seaming, Washing, Tempering, IG preparation).
3. **Inspection Lighting System (Transmission and Reflection Lights):** proper lighting for inspection of glass to be provided on the following areas: - ***Pre-Heat Washing Machine***; *Transmission* and *Reflection* inspection light must be available to inspect the washed glass. - ***Loading and Unloading Area for the Tempering Furnace***; *Transmission* and *Reflection* lights to be installed for inspecting the glass.
4. **Glass Cleanliness** needs to be maintained while washing the glass at the tempering washer and insulating washer.
5. Water Quality Monitoring Equipment *TDS Tester* and *pH Tester* need to make available and records can be maintained.
6. **Post Tempering QC Records and Inspection System** The post tempering entire quality inspection system needs to be established, to be implemented, records need to be monitored. Heat treatment quality parameters need to be checked after every product change, project change & after resuming the job post break. **a. Roll Wave measurement.** **b. Overall bow or Flatness of the glass.** **c. G.A.S.P (Stress) reading if available for H.S.** **d. Fragmentation/ Break Test.**
7. **Desiccant Test:** The test on desiccant (Boil Test – dT) needs to be performed, records to be monitored.
8. IG QC records and Inspection system The entire post insulating quality inspection system for IGU needs to be established, implemented and records to be monitored.

Laminating Certification Checklist

Section 1

GENERAL INFORMATION

Company Information

↗ COMPANY UNITED ARAB AUMINIUM COMPANY "UAAC"		↗ CERTIFICATION DATE 21 & 22 MAY 2017
↗ ADDRESS PO BOX 27299 MAKKAH-BAHRA 21941		
↗ CITY JEDDAH		↗ COUNTRY SAUDI ARABIA
↗ PHONE +966 12 591 4843	↗ FAX +966 12 591 5338	↗ WEBSITE WWW.UAAC-SA.COM

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Amer Ba-Amer	QC Manager in Glass Factory	Amer.saleh@uaac-sa.com
Bokhari	Quality Control Engineer	

Guardian Representatives

	Phone
FIELD SALES BASSAM ALLAF	+966 55 879 9558
COMMERCIAL SALES AHMAD ABU HASHEM	+966 55 549 8360
TECHNICAL SERVICES EXECUTIVE MAEN MUSAMIH	+966 50 162 2623

Certification Information

	Visit Type	Comments
☐	Pre-Cert Phone Screen	
☐	Pre-Audit Visit	
☑	Certification Audit	Recertification
☐	Follow-up Audit	

Products Used in Certification

	SG Series	Products Used
☐	Solar	
☑	High Performance	Neutral Plus 50
☐	Super Neutral	

Guardian Low-Level Laminated Production Simulation

Number of Monolithic Units to Be Laminated	Size of Monolithic Units	Stock Sheets Required
4	1830 mm x 2440 mm (72 in. x 96 in.)	2
4	1150 mm x 1900mm (46 in. x 75 in.)	2
8	610 mm x 915 mm (24 in. x 36 in.)	2

Test criteria:

1. The laminator must achieve an 80% yield (13 of 16 units).
2. The Low-Level Production Simulation is to be performed with heat-treated product. Edge deletion to be performed prior to lamination of low-E coatings.
3. All units to be assembled with 0.060 in. PVB interlayer and 6 mm mates.
4. Half the units assembled with the coating “embedded” (coating facing the PVB).
5. Half the units assembled with the coating “exposed” (coating facing away from the PVB).

Section 2

EDGE DELETION INFORMATION

❑ Acceptable
☑ Needs Improvement

Yes	No	Inspection Criteria	Comments
☑	❑	**Use of clean dry gloves**	
❑	☑	**Coated surface verified**	
☑	❑	**Proper handling procedure used**	
☑	❑	Edge deletion equipment properly maintained	
☑	❑	Is there an active Preventive Maintenance program in place?	
☑	❑	Lists areas in the PM program and frequency	
❑	☑	Stand-alone process	
☑	❑	Appropriate grinding wheel used	
☑	❑	Deleted edge is straight and continuous	
☑	❑	Deleted edge has all coating removed	
❑	☑	**Lites traceable to Guardian case tags**	
☑	❑	**Is there a system in place to train operators and if so how is it documented?**	Hands-on training.
General Comments			

Type of Edge Deletion	☑ Automated ❑ Manual
If Automated, what location?	Cutting Table
If Manual	❑ Handheld **or** ❑ Table
Type of Table	❑ Ball Caster ☑ Air Float ❑ N/A
Edge Deletion Wheel Type	LISEC
General Comments	

Section 3

ENTRY LOAD CONVEYOR

☑ Acceptable
❑ Needs Improvement

Type of Table ☑ Roller Ball ❑ Felt/Air Transfer ❑ Combination ❑ Other: _____

Yes	No	Inspection Criteria	Comments
❑	☑	**Use of clean dry gloves**	Glass is being transferred by bare hands. Explain to the customer the importance of using dry gloves while handling the glass.
❑	☑	**Coated surface verified**	Explain to the customer the importance of verifying the coated surface. Following the way it is coming from the cutting/ Tempering Logo section for the reference of the coated side.
❑	☑	**Proper handling procedure used**	Explain and show to the customer how to handle the glass properly.
☑	❑	Conveyor equipment in good working condition (roller balls, felt, etc.)	
❑	☑	Lites traceable to Guardian case tags	
☑	❑	Does conveyor feed directly to washer?	
General Comments			

Section 4

LAMINATING WASHING

☑ Acceptable
❑ Needs Improvement

Washer Manufacturer ❑ BILLCO ☑ Other:

Yes	No	Inspection Criteria		Comments	
❑	☑	**Lites traceable to Guardian case tags**			
❑	☑	**Use of clean dry gloves**			
❑	☑	**Coated surface verified**			
❑	☑	**Proper handling procedure used**			
☑	❑	Treated water used: ☑ RO ❑ DI			
☑	❑	Washer clean and maintained to OEM specs		Cleaning schedule: Weekly	
☑	❑	Is there a functional pre-rinse?			
☑	❑	Are spray/rinse bar nozzles positioned correctly and directed into brushes with good pressure?			
☑	❑	**Are low-E brushes installed?**			
☑	❑	Are brushes in good working condition? (not worn, touching the glass, balanced)			
☑	❑	Pinch rolls clean and adjusted correctly			
☑	❑	Is wash water clean?			
☑	❑	Are wash tanks drained regularly?		Schedule: Once in a day	
❑	☑	Water temperature of 49–60°C (120–140°F)		Set Temp: NA	Actual Temp: - C
☑	❑	Wash pH of 6–8	pH: 8.5		
☑	❑	Rinse pH of 6–8	pH: 8.5		
❑	☑	Soap used	Type:		
☑	❑	Washer chemical free (except for soap)			
☑	❑	Is rinse water clean?			
☑	❑	Properly functioning air nozzles			
☑	❑	TDS in rinse tanks < 200 ppm		Amount: ___-___ ppm.	Target < 200 ppm
☑	❑	**Glass is clean and dry (no spots/streaks)**			
☑	❑	Does washer feed directly into clean room?			
General Comments					

Section 5

CLEAN ROOM

☑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria	Comments
❑	☑	Lites traceable to Guardian case tags	
❑	☑	**Use of clean dry gloves**	
❑	☑	Use of clean room suit	
❑	☑	Use of hair nets	
❑	☑	Tack mats: ❑ Entry ❑ Exit	
☑	❑	Positive pressure lock	
☑	❑	Room temperature of 15 ^{0}C – 21 ^{0}C	Actual Temperature: 20.7 ^{0}C
❑	☑	Room humidity of 20 % - 35 %	Actual Humidity : 48 %
☑	❑	**Zim/Sucker frame cups free of dirt & oil**	
❑	☑	**Coated surface verified**	
☑	❑	**Proper handling procedure used**	
☑	❑	**Equipment in place to do inspection in transmission**	
☑	❑	**Customer trained to do inspection in transmission**	
☑	❑	**Equipment in place to do inspection in reflection**	
☑	❑	**Customer trained to do inspection in reflection**	
☑	❑	Is PVB placed on coated glass?	
❑	☑	Does PVB get dragged on coating?	
❑	☑	Coating damage noted	
❑	☑	**Inspection data recorded**	
General Comments			

Section 6

PRE-TACK NIP ROLLER

☑ Acceptable
❑ Needs Improvement

Roller pressure type: ☑ Air ❑ Manual			Roller pressure: 6.0 ~~psi~~ / bar
Yes	**No**	**Inspection Criteria**	**Comments**
☑	❑	Roller clean	
☑	❑	Rollers free-wheeling	
☑	❑	Uniform roller pressure	
General Comments			

Section 7

PVB TRIMMING CRITERIA & PROCEDURES

☑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria	Comments
❑	☑	Trimming outside of clean room	
❑	☑	Use of PPE (Personal Protective Equipment)	
☑	❑	Conveyors grounded	
☑	❑	Trim with even pressure (no pulling of PVB)	
❑	☑	Leaning on glass during trimming	Inform the customer not to lean on the glass while trimming.
☑	❑	Sharp trimming tools/changed often	
❑	☑	Visible flaking or edge chips	
☑	❑	Coated surface touched	Inform the customer not to touch the coated surface to avoid marks or finger prints.
General Comments			

Section 8

TACK OVEN INFORMATION AND BASE PROFILES

Tack Oven Information	
Tack Oven Manufacturer	Bystronic
Tack Oven Vintage (Year Built/Rebuilt)	-
Number of Bays	02
Type of Heating	☑ Radiation ❑ Air Assist ❑ Other: _____
Can top and bottom heat be adjusted independently?	❑ Yes ☑ No
Tack Oven Input Dimensional Capacity	2600 mm x 4500 mm
Operator Name	Mr. Irshad

Tack Oven Profile Information (Required)		
Product: NP 50	**Exposed**	**Embedded**
Stored Recipe Name/Number/ID	-	-
Cycle Time/Line Speed	-	-
Zone 1 Upper Zone Temperature(s)	140° C	140° C
Zone 1 Lower Zone Temperature(s)	140° C	140° C
Zone 2 Upper Zone Temperature(s)	230° C	230° C
Zone 2 Lower Zone Temperature(s)	230° C	230° C
Zone 3 Upper Zone Temperature(s)	230° C	230° C
Zone 3 Lower Zone Temperature(s)	230° C	230° C
Exit Temperature—Top	-	-
Exit Temperature—Bottom	-	-
Additional Furnace Data		

Section 9

POST-TACK NIP ROLLER

☑ Acceptable
❑ Needs Improvement

Roller pressure type: ☑ Air ❑ Manual			Roller pressure: 6.0 ~~psi~~/bar
Yes	No	Inspection Criteria	Comments
☑	❑	Roller clean	
☑	❑	Rollers free-wheeling	
☑	❑	Uniform roller pressure	
General Comments			

Section 10

TRANSFER TO AUTOCLAVE

☑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria	Comments
☑	❑	**Use of clean dry gloves**	
☑	❑	Interleaving materials: ☑ Edge clips (preferred) ☑ Wood dowels	
❑	☑	**Utilize edge clip technology only on exposed applications**	
❑	☑	Are harp racks used?	
NA		Harp racks are clean and well maintained	
NA		Avoid sliding the coated surface against the harp cords	
NA		Never place more than one lite within a slot	
General Comments			

Section 11

AUTOCLAVE INFORMATION AND BASE PROFILES

Autoclave Information and Base Profiles	
Autoclave Manufacturer	Scholz
Vintage (Year Built/Rebuilt)	2011
Autoclave Input Dimensional Capacity	2600 mm x 5100 mm

Autoclave Profile Information (Required)		
Product: Silver 35	**Exposed**	**Embedded**
Stored Recipe Name/Number/ID	-	-
Autoclave Cycle Time	-	-
Max. Temperature Achieved	140° C	140° C
Max. Pressure Achieved	11 bar	11 bar
Thermal Ramp-up Time	120 min	120 min
Thermal Hold Time	80 min	80 min
Thermal Cool-down Time	60 min	60 min
Pressure Ramp-up Time	120 min	120 min
Pressure Hold Time	80 min	80 min
Pressure Cool-down time	60 min	60 min
Total Autoclave Time	260 min	260 min
Obtain Copy of Chart	-	-
Additional Autoclave Data		

Section 12

AUTOCLAVE QUALITY INSPECTION

❑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria	Comments
❑	❑	Unit clear (no haze)	
❑	❑	Edge seal consistent	
❑	❑	PVB pull-back	
❑	❑	Coating damage	
❑	❑	Bubbles or PVB damage	
❑	❑	Scratches	
❑	❑	Corrosion	
General Comments			

Section 13

REVIEW/SUMMARY

Section	Acceptable	Needs Improvement	Comments
Edge Deletion	☑		
Entry Load Conveyor		☑	
Laminating Washing	☑		
Clean Room		☑	
Pre-Tack Nip Roller	☑		
PVB Trimming	☑		
Tack Oven	☑		
Post-Tack Nip Roller	☑		
Transfer/Interleaving	☑		
Autoclave	☑		
Autoclave QA Inspection	-	-	

Items That Require Improvement/Repairs before Certification Can Be Given
1. **Handling/ Gloves:** proper handling for the coated glass can be followed. Dry Gloves must be used while handling the coated for safety wise and avoid marks.
2. **Traceability of Guardian Tags:** system for tracking and tracing the tags needs to be developed and implemented.
3. **Detection of coating:** detection of the coating surface should be done at every and each stage of processing.
4. **Clean Room**; ▪ Clean room inspection records need to be maintained. ▪ Humidity level to be maintained (20 - 35) %.
5. **Coveralls** or Clean Room **Apparel** can be provided. ▪ Clean Room Suit ▪ Usage of Hair nets

Items That Need Additional Attention
1. Autoclave Quality inspection **records** need to be maintained.

Section 14

CERTIFICATION STATUS

- ☑ Certification Recommended
- ❑ Certification Pending
- ❑ Certification Denied

Documentation and Verification	
Bold items in this certification checklist are critical for successful product fabrication and good quality control	
Verification: The signature below verifies that the fabricator has read and understands the full contents of this Checklist and the following SunGuard fabrication documents: ❑ Fabricator User's Guide ❑ Coated Glass Limited Warranty ❑ Heat-Treatment Requirements for SunGuard Coated Glass Products ❑ Edge Deletion Requirements for SunGuard Coated Glass Products ❑ Requirements for Laminating SunGuard Coated Glass Products ❑ Requirements for Bending SunGuard Coated Glass Products ❑ Temporary Protective Film (TPF) Requirements for SunGuard SuperNeutral 68 HT	
↗ CUSTOMER REPRESENTATIVE NAME	↗ COMPANY
↗ CUSTOMER REPRESENTATIVE SIGNATURE	↗ TITLE
↗ GUARDIAN EXECUTIVE SIGNATURE	↗ DATE

Section 2

RECEIVING AND STORAGE

☑ Acceptable
☐ Needs Improvement

Yes	No	Inspection Criteria	Comments
☑		Indoor unloading **	
☑		Environmentally controlled area (no roof leaks, open doors, ventilation for proper air circulation, etc.) **	
☑		**Located proper distance (greater than 15.25 meters or 50 feet) from outside doors, glass washers and corrosive chemicals ****	
☑		Did cert. glass arrive undamaged?	
	☑	Visible Guardian case tags on newly received product	Tag Number: NA
☑		Is there a system in place to track and manage the rotation of glass inventory (First-in-first-out – FIFO system?	
	☑	Do they re-wrap unused lites when placing them back into storage after running a job?	Explain to the customer about the benefits of re-wrapping the balance of HP glass.
General Comments		** This criteria is strict to follow for High Performance and Super Neutral products	

Section 3

GLASS CUTTING AND AUTOMATED EDGE DELETION

☑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria	Comments
☑		**Use of clean dry gloves**	
	☑	**Coated surface verified**	Follow the arrow on the box tag. Explain to the customer the importance of verifying the coating (film) side in all process stages to avoid quality issues might happen when glass is handled with coating facing downwards.
☑		**Proper handling procedure used**	
NA		TPF remains on surface during cutting*	
☑		Cutting equipment in good working condition (felt, drives, etc.)	
☑		**Is there an active Preventive Maintenance program in place and how often is it performed?**	
☑		Properly maintained suction cups	
NA		**Suction cup drop to table maintained**	
☑		Tilt table in good working condition	
	☑	**Guardian case tag information recorded**	
☑		**Guardian approved cutting fluid used in moderation**	
☑		Good quality cut edge	
☑		**Lites transferred individually from table to rack**	
☑		Automated edge deletion?	
☑		Coated side pickup?	
☑		**Is there a system in place to train operators and if so how is it documented?**	Hands On training
	☑	Are there any procedures in place to help the operators troubleshoot if a problem occurs?	
General Comments		Two Cutting Machines available – LISEC. * TPF is on SuperNatural HT products only	

Important Cutting and Automated Edge Deletion Information					
Cutting Table Manufacturer	❑ BILLCO ❑ HEGLA	❑ PTC ❑ BOTTERO	☑ LISEC ❑ BYSTRONIC	❑ GRENZEN ❑ GED	❑ Other _____
Approximate Vintage (Year Built/Rebuilt)	2007010787/ 2007				
Cutting Wheel Angle	145°				
Cutting Wheel Pressure	2 Bar				
Cutting Speed	70 – 80%				
Cutting Fluid	ACECUT 5250				
Automated Edge Deletion Wheel Type	LISEC & ARTIFEX (available)				
Automated Edge Deletion Speed	90%				
Automated Edge Deletion Pressure	3.2 Bar				
Data Table for Thickness wise Selections	NA				

* Temporary protective film (TPF) is applied only to SunGuard SuperNeutral HT coatings. Many of the critical handling steps outlined in this checklist were developed for handling split-silver products without TPF.

If the TPF is undamaged and remains on the surface during processing, many of the special handling considerations outlined in this checklist that relate to potential surface damage will not be applicable to TPF coated glass. However, for annealed SuperNeutral or SuperNeutral HT coatings where the TPF has been removed, all aspects of this checklist are relevant and should be followed.

TPF should remain on the surface of the coated glass during all fabrication processes and removed just before the glass enters the furnace.

Section 4

SEAMING

☑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria	Comments
☑		Seaming process: ☑ wet ❑ dry	
☑		**Use of clean dry gloves**	
☑		**Coated surface verified**	Following the way it is coming from the cutting section.
☑		**Proper handling procedure used**	
NA		TPF remains on surface during seaming*	
☑		Seaming equipment in good working condition (roller balls, felt, belts, etc.)	
☑		Are the belts changed on a regular basis and if so, how often are they changed?	Based on grinding quality
☑		Is there an active Preventive Maintenance program in place?	
☑		Lists areas in the PM program and frequency	
	☑	**Lites traceable to Guardian case tags**	
☑		Good quality seamed edge	
☑		Does seamer feed directly to washer?	
	☑	Are there inspection criteria in place to make sure that the edges are properly seamed (example: posted photos showing acceptable and unacceptable edges)?	
☑		**Is there a system in place to train operators and if so how is it documented?**	Hands on training.
General Comments		* TPF is on SuperNeutral HT only	

Important Seaming Information				
Type of Table	❑Roller Ball	❑ Felt/Air Transfer	❑ Combination	❑ Other: Belt_____
Type of Seamer	❑V-Belt	☑ Auto In-Line	❑ Edge Grinding	❑ Other: _____
If Wet Seaming, What Is the Fluid Used?	Water			

Section 5

PRE-HEAT TREAT WASHING

❑ Acceptable
☑ Needs Improvement
❑ N/A

Yes	No	Inspection Criteria		Comments	
☑		**Use of clean dry gloves**			
	☑	**Coated surface verified**		Following the way it is coming from the seaming section.	
☑		**Proper handling procedure used**			
NA		TPF remains on surface during washing*			
☑		Treated water used: ☑ RO ❑ DI ❑ Softened			
☑		Washer manufacturer: ❑ BILLCO ☑ Other:		LISEC	
☑		Washer clean and maintained to OEM/ Preventive Maintenance criteria		Cleaning Schedule: Weekly	
☑		Is there a functional pre-rinse?			
☑		Are spray/rinse bar nozzles positioned correctly and directed into brushes with good pressure?			
☑		**Are low-E brushes installed and how often are they changed and replaced?**			
☑		Are brushes in good working condition? (not worn, touching the glass, balanced)			
☑		Pinch rolls clean and adjusted correctly			
☑		Is wash water clean?			
☑		Are wash tanks drained regularly?		Schedule: Daily	
☑		Water temperature of 49–60°C (120–140°F)		Set Temp: NA	Actual Temp: 34.8°
☑		Wash pH of 6–8	pH: 8.48		
☑		Rinse pH of 6–8	pH: 8.4		
	☑	Soap used	Type:		
☑		Washer chemical free (except for soap)			
☑		Is rinse water clean?			
☑		Total Dissolved Solids in Rinse Tanks		Amount: 184 ppm Target <200 ppm	
☑		Properly functioning air nozzles			
☑		Is there an active Preventive Maintenance program in place?			
☑		Lists areas in the program and frequency		Monthly	
	☑	**Lites traceable to Guardian case tags**			
	☑	**Equipment in place to do inspection in transmission**			
	☑	**Equipment in place to do inspection in reflection**			
☑		**Customer trained to do inspection in both transmission and reflection**			
	☑	**Glass is clean and dry (no spots/streaks)**			
☑		**Does washer feed directly into furnace?**			
General Comments		- Glass have streaks and water marks. - Glass was cleaned manually. - Guardian water meter was used to measure pH and Water Temperature. * TPF is on SuperNeutral HT only			

A certification audit will be conducted at all fabricators working with Guardian heat-treatable SunGuard solar control & low-E coatings. The audit will consist of a low-level production simulation consisting of the lite sizes and quantities outlined in the table below.

SunGuard Heat-Treatable Coating Low-Level Production Simulation Requirements

	Number of Lites to be Run	Size of Lites	Stock Sheets Required
#1	2	1829 mm x 2438 mm (72 in. x 96 in.)	2
#2	6	1175 mm x 1908 mm (46.25 in. x 75.125 in.)	2
#3	12	610 mm x 914 mm (24 in. x 36 in.)	1

The fabricator must achieve 85% yield (by total number of lites) within a targeted 1-hour time frame to receive certification.

The low-level production simulation should be successfully accomplished within 1 hour and is designed to ensure that the fabricator's process is optimized for consistent quality output across a range of sizes. The fabricator may use the drops after cutting the trial-sized lites to prepare for the audit, but the actual production run must take place in the presence of a Guardian Technical Services Executive and utilize the sizes indicated.

In addition, if the fabricator does not have a reliable quality system in place to inspect the glass before and after heat-treatment, the certification engineer can provide a suitable load-end quality check and final quality check inspection system as outlined in the Guardian documents "Heat-Treating Load-End Quality Control Guidelines," and "Heat-Treating Final Quality Control Guidelines." These documents can be obtained by contacting your local Guardian Technical Services Executive.

For recertifications, the same process flow will be followed, except for the size protocol listed above. Recertification efforts will utilize one of the following approaches:

1. Observe an actual production run involving the most currently used SunGuard product.

2. Product used from the customer's inventory and cut to a standard production size for the fabricator.

Section 6

HEAT STRENGTHENING & TEMPERING

☑ Acceptable
❑ Needs Improvement
❑ N/A

Yes	No	Inspection Criteria	Comments
☑		**Use of clean dry gloves**	
☑		**Coated surface verified**	
☑		**Proper handling procedure used**	Explain to the customer the proper way for handling the coated glass.
NA		TPF removed correctly before furnace*	
☑		Coating inspected before heat treatment	
☑		Furnace in good working condition	
		Furnace maintained to OEM/PM specs	
☑		Is there an active preventive maintenance program in place?	
	☑	Lists areas in the PM program and frequency	
☑		**SO_2 turned off 30 min. prior to processing**	
☑		Aspiration on	
☑		**Temperature not exceeding 700°C (1292°F)**	
☑		Can the operator make furnace adjustments?	☑ Temp. ☑Line Speed ☑ Aspiration ☑ Other
☑		**Tempered load test meets Guardian protocol outlined in Heat Treat PAN****	
☑		**Heat-strength load test meets Guardian protocol outlined in Heat Treat PAN****	
	☑	Lites traceable to Guardian case tags	
☑		**Zebra board in place online**	
	☑	**Equipment in place to do inspection in transmission**	
☑		**Customer trained to do inspection in transmission**	Show the customer how to inspect the glass on both transmission and reflection modes.
	☑	**Equipment in place to do inspection in reflection**	
☑		**Customer trained to do inspection in reflection**	
☑		**Is there a system in place to train operators and if so how is it documented?**	Hands on
	☑	Are there any procedures in place to help the operators troubleshoot if a problem occurs?	
	☑	Coating inspected after heat-treatment	Explain to the customer the importance of coating inspection after Heat treatment.
	☑	Coating damage noted	
☑		Do they have an online inspection system and if so is the data recorded?	
☑		Using foam tabs, cork tabs or polyfoam for separating lites	
☑		Glass temperature below 50°C (122°F) before packing or further processing	
	☑	Do they monitor yields and what are they?	
General Comments		- iLook accessory installed but not operational.	

Section 7

FURNACE INFORMATION AND BASE PROFILES

Furnace Information				
Furnace Manufacturer	❑ HHH ❑ UNIGLASS	❑ GLASSTECH ☑ TAMGLASS	❑ IANUA ❑ GLASSROBOTS	❑ Other: _____
Furnace Vintage (Year Built/Rebuilt)	GLASTON- FC 500 2013			
Number of Bays	1			
Type of Heating	☑ Radiation ❑ Air Assist	☑ Convection ❑ Combination	❑ Other: _____	
Largest Piece that can be Processed	2800 x 6000 mm			
Fuel	❑ Gas ☑ Electric			
Operator's Name	Mr. Mohamed Nadeem			

Base Furnace Profile Information (Required)			
Product: Neutral Plus 50		**Heat Strengthened**	**Tempered**
A	Guardian Tag Number	-	NA
B	Product Thickness	-	6 mm
C	Substrate Color	-	Clear
D	Stored Recipe Name	-	-
E	Total Cycle Time	-	326 sec
F	Zone Cycle Time	-	-
G	Aspiration Settings **(TOP)**	-	(0, 70) (55, 60) (75, 0)
H	Aspiration Settings **(Bottom)**	-	-
I	**Zone 1** Upper Zone Temperature(s)	-	677
J	**Zone 1** Lower Zone Temperature(s)	-	668
K	**Zone 2** Upper Zone Temperature(s)	-	-
L	**Zone 2** Lower Zone Temperature(s)	-	-
M	Primary Quench Settings	-	1800 Pa
N	Secondary Quench Settings	-	2000 Pa
Additional Furnace Data		-	Air Balance = 41 Top Nozzles = 30mm Unload Speed = 300 mm/s

Section 8

OFFLINE HEAT TREATMENT QUALITY/INSPECTION

☐ Acceptable
☑ Needs Improvement
❑ N/A

Yes	No	Inspection Criteria	Comments
	☑	Flat inspection table/inspection station	
☑		QC equipment readily available: ☑ Tape measure ❑ Scale / 50X50mm Aperture(break test) ❑ Micrometer ❑ Feeler guide ☑ Straight-edge	
	☑	Roll gauge calibrated	Roller Wave Gauge Not Available
☑		G.A.S.P. unit calibrated	Required for HS glass
	☑	Zebra board available offline	
	☑	Inspection light stand	
	☑	Equipment in place to do inspection in transmission	
☑		Customer trained to do inspection in transmission	
	☑	Equipment in place to do inspection in reflection	
☑		Customer trained to do inspection in reflection	
	☑	Is a valid quality system in place and how often do they perform checks?	
☑		Are the operators trained to use the following QC equipment: ❑ Roll gauge ❑ G.A.S.P. ☑ Tape measure ☑ Scale / 50 X 50 mm Aperture (break test) ❑ Micrometer ❑ Feeler gauge ☑Straight-edge	
	☑	Inspection data recorded (see below)	
	☑	Past QC data reviewed and analyzed	
☑		Tempered product meets approved User's Guide standards	
☑		Heat-strengthened product meets approved User's Guide standards	
	☑	Do they have any SPC processes in place for analysis of their furnace data and/or use statistical tools to correlate their quality data?	
General Comments			

Section 9

HEAT-TREATING FINAL QUALITY CHECK

❑ Acceptable
☑ Needs Improvement
❑ N/A

Task	Required Frequency	Actual Frequency	Comments
Record date/shift/time	These items must be checked and data recorded at the beginning of the shift and then once an hour. They must also be checked whenever a product or thickness change is made. (see Heat Treatment PAN for details)		The entire post tempering quality inspection system needs to be established, frequency to be decided, to be implemented and records to be monitored.
Record line item/tag number			
Record product type			
Heat-strengthened or tempered?			
Record squareness			
Record thickness			
Check logo			
Break test data if tempered			
G.A.S.P. average			
Check bow & warp			
Check roll distortion			
Check surface quality			
Sign off approval optical QC			
General Comments	The entire post tempering quality inspection system needs to be established, frequency to be decided, to be implemented and records to be monitored.		

Section 10

RANDOM SAMPLE OPTICAL MEASUREMENTS

☑ Acceptable

❑ Needs Improvement

Attributes	Temper		Tolerance
Protocol Size	**1220mm x 1830mm**	**610 mm x 915 mm**	
Roll Wave	0.02 mm	0.07 mm	Target .07 mm Max .13 mm
Surface Pressure	-	-	> 10,000 psi
Local Bow	<0.1 mm	<0.1 mm	0.5 mm / 300 mm
Flatness (Warp or Bow)	< 1mm	< 1mm	0.004 mm / mm
Break Test	67	78	Particle Count ≥ 40
General Comments	Guardian Roller Wave Gauge used to measure the Roll Wave distortion.		

Attributes	Heat-Strengthened		Tolerance
Protocol Size	**1220mm x 1830mm**	**610 mm x 915 mm**	
Roll Wave	-	-	Target .07 mm Max .13 mm
Surface Pressure	-	-	3,500–7,500 psi
Local Bow	-	-	0.3 mm / 300 mm
Flatness (Warp or Bow)	-	-	0.003 mm / mm
General Comments			

Section 11
EDGE DELETION

☑ Pre-Furnace ☑ Pre-Insulating ☑ Acceptable ❑ Needs Improvement

Type	☑ Auto. on Cutting Table (see p. 3)	❑ Auto. on IG Line	❑ Manual (Hand Style)	❑ Other: _____

Yes	No	Inspection Criteria	Comments
☑		**Use of clean dry gloves**	
	☑	**Coated surface verified**	
☑		**Proper handling procedure used**	
☑		Edge deletion equipment properly maintained	
☑		Is there an active Preventive Maintenance program in place?	
☑		Lists areas in the PM program and frequency	
☑		Guardian Heat Treatable coatings edge deleted post-furnace	
	☑	Stand-alone process	
☑		Appropriate grinding wheel used	
☑		Deleted edge is straight and continuous	
☑		Deleted edge has all coating removed	
	☑	Do they produce any offset IGUs?	If yes, make sure that the coated surface for the SunGuard High Performance and SuperNeutral products I edge-deleted from the offset edge to the sightline.
	☑	**Lites traceable to Guardian case tags**	
☑		**Is there a system in place to train operators and if so how is it documented?**	Hands – on training.
General Comments			

Section 12

INSULATING GLASS WASHING

☑ Acceptable
❑ Needs Improvement

Yes	No	Inspection Criteria		Comments	
☑		**Use of clean dry gloves**			
☑		**Coated surface verified**			
☑		**Proper handling procedure used**			
☑		**Is the coating edge deleted?**			
☑		Treated water used: ☐ RO ☑ DI ❑ Softened			
☑		Washer manufacturer: ❑ BILLCO ☑ Other:		Bystronic	
☑		Washer clean and maintained to OEM/ Preventive Maintenance criteria		Cleaning schedule: Monthly	
☑		Is there a functional pre-rinse?			
☑		Are spray/rinse bar nozzles positioned correctly and directed into brushes with good pressure?			
☑		**Are low-E brushes installed and how often are they changed?**			
☑		Are brushes in good working condition? (not worn, touching the glass, balanced)			
	☑	Pinch rolls clean and adjusted correctly			
☑		Is wash water clean?			
☑		Are wash tanks drained regularly?		Schedule: Daily	
	☑	Water temperature of 49–60°C (120–140°F)		Set Temp: NA	Actual Temp: 29.9°
☑		Wash pH of 6–8	pH: 8.17		
☑		Rinse pH of 6–8	pH: 8.17		
	☑	Soap used	Type:		
☑		Washer chemical free (except for soap)			
☑		Is rinse water clean?			
☑		Properly functioning air nozzles			
☑		Total Dissolved Solids in Rinse Tanks		Amount: 191 ppm. Target <200 ppm.	
☑		Is there an active preventive maintenance program in place?		monthly	
☑		Lists areas in the program and frequency			
☑		**Lites traceable to Guardian case tags**			
☑		**Equipment in place to do inspection in transmission**			
☑		**Equipment in place to do inspection in reflection**			
☑		**Customer trained to do inspection in both transmission and reflection**			
☑		**Coating inspected after washing**			
☑		**Coating damage noted**			
	☑	**Glass is clean and dry (no spots/streaks)**			

Section 13

INSULATING GLASS ASSEMBLY

☑ Acceptable
❑ Needs Improvement

Type of Insulating Line: ☑ Vertical IG Line ❑ Horizontal IG Line * See comments after section 14

Note: Guardian requires that all SunGuard coatings be used in a dual-seal IGU for commercial applications.

Yes	No	Inspection Criteria	Comments
	☑	**Use of clean dry gloves**	
☑		**Coated surface verified**	
	☑	**Proper handling procedure used**	
☑		**Lites traceable to Guardian case tags**	
	☑	**Is there a system in place to train operators and if so how is it documented?**	
☑		Do they have a preventive maintenance program in place to monitor various areas of the insulating process (for example: the sealant pump and system and press area)? If so, list areas.	
Spacer System			
☑		Spacer Type: Aluminium	
☑		Frame Type: ☑ Cut ☑ Bent	
☑		Is the spacer system processed in a way in which it maintains its original shape (no deformation)?	
☑		Are corners or joints continuous (no gaps or breaks)?	
Desiccant Fill			
☑		Is the desiccant stored in a cool dry place per OEM recommendations?	
☑		Is the spacer being filled according to OEM specifications?	
	☑	Does the customer test for the active life of the desiccant (i.e. boil test) and record the results on a daily frequency?	Trained the customer on how to perform the desiccant – boil test.
Primary Sealant Application			
☑		Polyisobutylene (PIB) Type:	TREMCO
☑		Is the PIB applied continuous with no skips or breaks?	
Spacer and Glass Assembly			
☑		Is the coated surface checked in order to make sure the coating is facing inward before assembly?	
☑		Is the spacer applied uniformly to the sightline to prevent sag or bow?	
	☑	Is there a quality system in place that specifies what is acceptable and unacceptable for defects (voids, pinholes, clusters)?	
	☑	Are the operators properly trained on how to inspect the units for defects?	Explain to the customer how to inspect the double glazed unit prior sealing it.
	☑	**Equipment in place to do inspection in transmission**	
	☑	**Equipment in place to do inspection in reflection**	
☑		**Customer trained to do inspection in both transmission and reflection**	
☑		How is the pressure monitored in the press area for the IG?	Auto- 6 bar

	☑	Is there a calibration process that helps assure that the correct pressure is being applied to the unit?	
	☑	Does the customer use capillary tubes in their process?	
☑		Type of Sealants Used:	❑ One-part ☑ Two-part ❑ Both
☑		Sealant Name and Lot#: Dow corning	N231101608 – 25 Dec 2017
☑		Does the customer track the sealant type and lot number through specific jobs?	
☑		**Is there a quality system in place to test for conformation of proper sealant characteristics (mix ratio and sealant cure time)?**	
☑		**If there is a system in place, what tests are performed?**	❑ Butterfly ❑ Stick Life ☑ Both
☑		Is the test data recorded and at what frequency is the test performed?	
☑		Are the operators trained on how to perform the various tests and do they understand the results?	
☑		Is the space between the back of the spacer and the edge of the glass filled completely, with no voids, air pockets, or bubbles?	
☑		Does the customer check a finished IGU outside using natural light? If so, at what frequency?	
☑		Does the customer have the capability to gas fill and if so what type of gas is used?	Argon

POST INSULATING QUALITY INSPECTION

☑ Acceptable

❑ Needs Improvement

Task	Required Frequency	Actual Frequency	Comments
Coating location verified	These items must be checked and data recorded at the beginning of each shift		
Is there visible glass offset?			
Is sightline consistent?			
No edge deletion encroachment			
Inspect primary sealant skips			
Inspect secondary skips			
Are units concave/convex?			
Visual inspection in transmission			
Visual inspection in reflection			
General Comments			

*Note to TSE: If the fabricator is utilizing a horizontal IG line, you must relay the following information to the GM/Owner, Production Manager, Production Supervisor, and Lead IG Operator during the audit and during the audit debrief. TSE is responsible for conveying this message exactly as written below.

Fabricators with horizontal insulating lines should be extremely cautious regarding potential glass deflection. During horizontal glass insulation, the unsupported upper lite can sag under its own weight, creating a concave effect in the unit. The resulting deflection creates an observable concave or collapsed appearance on the unit's exterior. The amount of deflection is solely a function of the horizontal insulating process and the weight of the glass. In fact, this appearance has been cause for rejection on project sites.

The deflection is caused by a combination of the shape, size, weight and thickness of glass. As an example, a horizontal insulating process involving a 1,200 mm X 1,200 mm (1.44 m^2)square unit could produce a 6 mm (¼ ") deflection in the center. However, a rectangular unit of the same area (e.g., 600 mm X 2,440 mm) may exhibit no deflection. Aspect ratio is critical; squares will always be at greater risk than rectangles. As an interim guideline, Guardian recommends that the insulation crew measure deflection on square units and on any unit greater than 1.44 m^2.

The concave appearance may be reduced by placing the unit's #1 surface against a solid base for support during sealant application. Deflection is easily measured by attaching string diagonally from opposing corners. The deflection should be measured where the two strings intersect. Units exhibiting any measurable gap between the string intersection and glass surface should not be shipped if any optical distortion is visibly apparent.

Quality control of the final product is a fabricator responsibility. The fabricator must ensure that the performance and optical requirements of the project can be met with the available capabilities at the factory. Guardian recommends that inspection for deflection be added to the insulator's daily quality routine. As a final check, representative units should be spot checked outdoors to confirm acceptable optics.

INSULATING CERTIFICATIONS

❑ Acceptable
❑ Needs Improvement
☑ N/A

Yes	No	Inspection Criteria	Comments
❑	❑	Third party certification information (organization name)	
❑	❑	Certification Number(s)	
❑	❑	Issue Date	
❑	❑	Copies of certification provided	
General Comments			

Section 2

AUDIT INITIAL REPORT

Section	Acceptable	Needs Improvement	N/A	Comments
Receiving and Storage	☑			
Glass Cutting	☑			
Seaming	☑			
Pre-Heat Treat Washing		☑		
Heat Treatment Process/Load QC	☑			
Offline Heat-Treat, Quality/Final QC		☑		
Actual Base-Line Optical MM	☑			
Interleaving	☑			
Edge Deletion	☑			
Insulating Glass Washing	☑			
Insulating Glass Assembly	☑			
Post-Insulating QA Inspection	☑			
Insulating Certifications			☑	

Commendable Activities
1. Properly maintained equipments.
2. Very good layout for the flow of processing.
3. The team is keen to learn the best practices.
4. Good housekeeping maintained in the factory.

Recommendations for Improvement
1. **FIFO:** FIFO system needs to be put in place to ensure the rotation of glass inventory.
2. **Re Wrapping:** The glass can be re-wrapped by plastic after taking out the glass sheets from the box for processing.
3. **Cutting Data Table:** Data table for the selection of cutting wheel can be prepared and be made available for viewing by operators for better understanding.
4. **Wash Water Quality:** Water temperature can be maintained between 49° - 60° C in the pre-heat treatment washer & IGU washer.
5. **Off Line Quality Inspection System:** Facility for off line quality inspection system can be provided, records can be monitored. 1. Flat Inspection Table 2. Inspection Lights Transmission and Reflection 3. Zebra Board Offline 4. Inspection Light Stand • Quality Tools: i. Aperture 50x50mm ii. Straight edge iii. Feeler Gauge
6. **IGU Inspection:** Day light inspection needs to be implemented on daily basis and records need to be maintained.
7. **Display of the standard work practices & acceptable quality standard:** Visual aids about work practices and quality standards can be posted at strategic areas to improve the awareness of people working on the shop floor.
8. **Yield Monitoring:** Yield in the tempering line can be monitored for efficiency improvement.
9. **Work Instructions & Procedures:** The work instruction and procedures can be developed for the critical process.
10. **Preventive Maintenance PM:** the PM program needs to be established and implemented in an effective way for the equipments.

CERTIFICATION STATUS

- ❑ Certification Recommended
- ☑ Re- Certification Pending
- ❑ Certification Denied

Documentation and Verification
Bold items in this certification checklist are critical for successful product fabrication and good quality control
Verification: The signature below verifies that the fabricator has read and understands the full contents of this Checklist and the following SunGuard fabrication documents: ❑ Fabricator User's Guide ❑ SunGuard Limited Warranty ❑ Temporary Protective Film (TPF) Guidelines – Product Application Note. ❑ Edge Deletion Guidelines – Product Application Note. ❑ Heat-Treatment Guidelines – Product Application Note. ❑ Heat Soaking Guidelines – Product Application Note. ❑ Laminating Guidelines – Product Application Note. ❑ Insulating Glass Guidelines – Product Application Note. ❑ Bending Requirements – Product Application Note. ❑ Thermal Breakage Guidelines – Product Application Note.

CUSTOMER REPRESENTATIVE NAME	COMPANY
CUSTOMER REPRESENTATIVE SIGNATURE	TITLE
GUARDIAN EXECUTIVE SIGNATURE	DATE

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Solar products
Design
Service

SCHÜCO

M/s	:	**UNITED ARAB ALUMINUM COMPANY (UAAC) - KSA**
Fax	:	**00966 12 591 5338**
Client	:	**King Abdullah Foundation**
Consultant	:	**Meinhardt Group**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**King Abdullah Foundation – Hotel, Convention Center & Offices Building – Riyadh**

Sharjah, 25th April 2016

To Whom It May Concern

Dear Sirs,

We hereby confirm that Schüco Middle East Windows and Façade System LLC will allow M/s UNITED ARAB ALUMINUM COMPANY - KSA, the use of Schüco Systems and support on the above mentioned project.

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- Allowing the use of Schüco designs and the technical support during the design process.
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Yours truly,

For and on Behalf of Schüco Middle East Windows & Façade System L.L.C.

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P O Box 1861 · Sharjah · U A.E

Ammar H. Alul
General Manager

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SCHÜCO

M/s	:	**UNITED ARAB ALUMINUM COMPANY (UAAC) - KSA**
Fax	:	**00966 12 591 5338**
Client	:	**Ministry of Education – Riyadh, El Ahsa, Jeddah & AL Madenah**
Consultant	:	**Dar AL Handasah**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**King Saud University**

Sharjah, 25th April 2016

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SCHÜCO

M/s	:	**UNITED ARAB ALUMINUM COMPANY (UAAC) - KSA**
Fax	:	**00966 12 591 5338**
Client	:	**Elsheakh Abdullah AL Rajehy**
Consultant	:	**Architectural Consultant - Riyadh**
Project	:	**Makkah Hotel**

Sharjah, 25th April 2016

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SCHÜCO

M/s	:	**UNITED ARAB ALUMINUM COMPANY (UAAC) - KSA**
Fax	:	**00966 12 591 5338**
Client	:	**Ministry of Education - Riyadh**
Consultant	:	**Dar AL Handasah**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**Princess Nora University**

Sharjah, 25th April 2016

To Whom It May Concern

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SCHÜCO

M/s	:	**UNITED ARAB ALUMINUM COMPANY (UAAC) - KSA**
Fax	:	**00966 12 591 5338**
Client	:	**Senegal Government**
Consultant	:	**STUDI int'l, Egisavia & SACI**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**Senegal Airport - Dakar**

Sharjah, 25th April 2016

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SCHÜCO

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Fax	:	**00966 12 591 5338**
Client	:	**Saudi National Guards**
Consultant	:	**Dar AL Handasah**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**Umm El Melh Military Airport – South KSA**

Sharjah, 25th April 2016

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SCHÜCO

M/s	:	**UNITED ARAB ALUMINUM COMPANY (UAAC) - KSA**
Fax	:	**00966 12 591 5338**
Client	:	**King Abdul Aziz Endowment**
Consultant	:	**Dar AL Handasah**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**King Abdul Aziz Endowment Towers - Makkah**

Sharjah, 25th April 2016

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Fax	:	**00966 12 591 5338**
Consultant	:	**Dar AL Handasah**
Main Contractor	:	**Saudi Binladin Group ABCD**
Project	:	**King Abdul Aziz International Airport - Jeddah**

Sharjah, 25th April 2016

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