



Kinzok Aluminum Alloy Panels

User should check the validity of the Certificate by contacting Member Secretary, BMBA at BMTPC or the Holder of the Certificate

Name and Address of Certificate Holder: **M/s Shree Manik Industries Pvt. Ltd.**
B-6/24 Site -5, Kasna Industrial Area, Greater Noida, Gautam Budha Nagar, U.P.-201306
Website: www.kinzok.com
Email: industriesmanik@gmail.com


Performance Appraisal Certificate
PAC No. **1067-C/2023**
Issue No. **01**
Date of Issue: **17.07.2023**



Building Materials & Technology Promotion Council
Ministry of Housing & Urban Affairs
Govt. of India
Core 5 A, First Floor, India Habitat Centre
Lodhi Road, New Delhi -110003

Tel: 011-24636705, Fax: 011-24642849
E-mail: info@bmtpc.org Website: www.bmtpc.org

Performance Appraisal Certificate**For****Kinzok Aluminum Alloy Panels****Issued to****M/s Shree Manik Industries Pvt. Ltd.****STATUS OF PAC**

S. No.	Issue No.	Date of Issue	Date of Renewal	Amendment		Valid upto (Date)	Remarks	Signature of Authorized Signatory
				No.	Date			
1	01	17.07.2023				16.07.2024		

CONTENTS

PART 1 CERTIFICATION.....	4
1.1 Certificate Holder	4
1.2 Description of the Component.....	4
1.3 Assessment	6
1.4 Uses of KINZOK Aluminium Alloy Panels	7
1.5 Conditions of Certification.....	7
1.6 Certification	8
PART 2 CERTIFICATE HOLDER’S TECHNICAL SPECIFICATION	9
2.1 General	9
2.2 Specifications of the Component	9
2.3 Special features of the component	10
2.4 Manufacturing Process	11
2.5 Installation Procedure	14
2.6 Skill Requirement at Site	16
2.7 Inspection & Testing at Plant	16
2.8 Guarantees / Warranties provided by the PAC holder.....	16
2.9 Services provided by the PAC holder to the Customer.....	16
2.10 Responsibility.....	16
PART 3 BASIS OF ASSESSMENT AND BRIEF DESCRIPTION OF ASSESSMENT PROCEDURE	17
3.1 Assessment	17
3.2 Test Performed for Assessment	17
3.3 Quality Assurance System	18
3.4 Site Inspection	18
3.5 Execution of Projects.....	19
PART 4 STANDARD CONDITIONS	21
PART 5 LIST OF APPLICABLE STANDARDS AND CODES	23
CERTIFICATION.....	24
PART 6 LIST OF ABBREVIATIONS	25
PERFORMANCE APPRAISAL CERTIFICATION SCHEME – A BRIEF	26
ANNEX 1 Quality Assurance Plan.....	27
ANNEX 2 Fixing details of Panels.....	28

PART 1: CERTIFICATION

1.1 Certificate Holder: **M/s Shree Manik Industries Pvt. Ltd.**
B-6/24 Site -5, Kasna Industrial Area,
Greater Noida, Gautam Budha Nagar,
U.P.-201306
Website: www.kinzok.com
Email: industriesmanik@gmail.com

1.2 Description of the Component

1.2.1 Name of the Component - Kinzok Aluminum Alloy Panels

1.2.2 Brand Name: KINZOK

1.2.3 Brief Description

The Panels are factory fabricated single skin aluminum alloy panels for use as external /internal cladding & ceiling applications in various types of building structures. The panels are available in thickness of 0.8 mm to 1.4 mm, to achieve required level of structural stability.

The structure built with the panels can incorporate MEP services along with various other architectural elements such as cove. These panels act as Rain screen facade which through natural air ventilation system brings some advantage in terms of thermal efficiency in the buildings. Being aluminum based, the panels have good strength to weight ratio.

1.2.4 Size & Profile of the Panel

1.2.4.1 Size of the Panel

Panels are available as per the following dimensions;

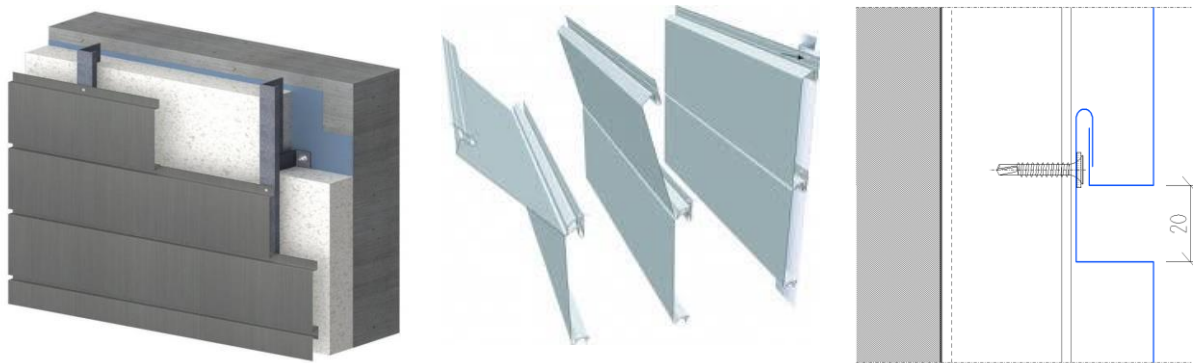
Thickness:	0.8 mm to 1.4 mm
Maximum Length:	2400 mm
Maximum Width:	400 mm

1.2.4.2 Profile of the panels

i. Dovetail Panel

Dovetail Panels are fabricated for External / Internal Rain Screen cladding and false ceiling application and can be installed vertically or horizontally with hidden fastener. The panels have a mechanism of panel to panel interlocking with the groove as per the design requirement. It requires aluminum box section framing of 50x25 mm to be fixed vertically on the base structure at the maximum distance of 750 mm with Aluminum L angle of minimum 2 mm thickness.

Pictorial Representation of Dovetail Panel

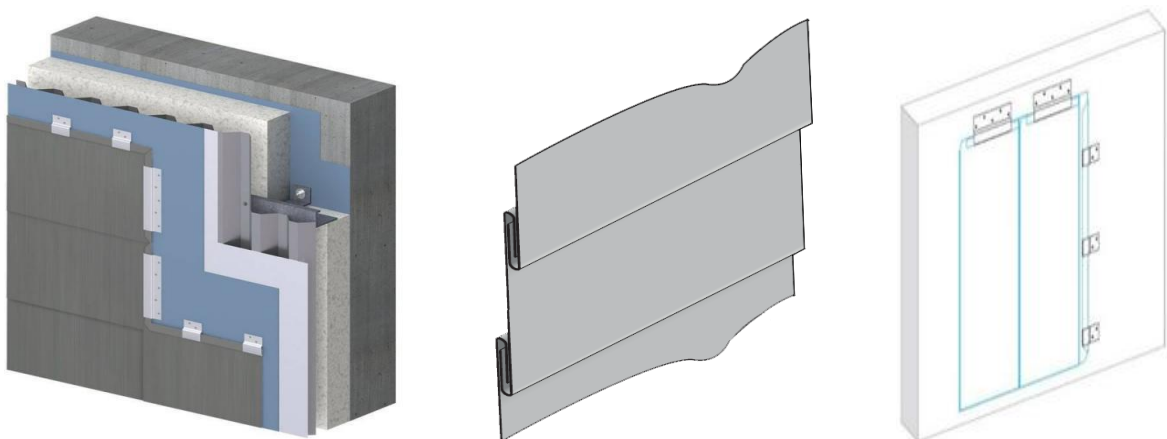


ii. Monolock Panel

Monolock Panels are factory fabricated panels for Rain screen external / internal cladding or ceiling can be installed horizontally / vertically / diamond shape. It has the recessed joint with concealed fastening on a continuous support fixed to the supporting structure, which can be masonry or metal. Monolock panels are manufactured in 0.7/0.8 mm thickness.

Monolock panels are interlocked into each other from all four sides with concealed G.I. clips fastened into continuous base support (deck sheet).

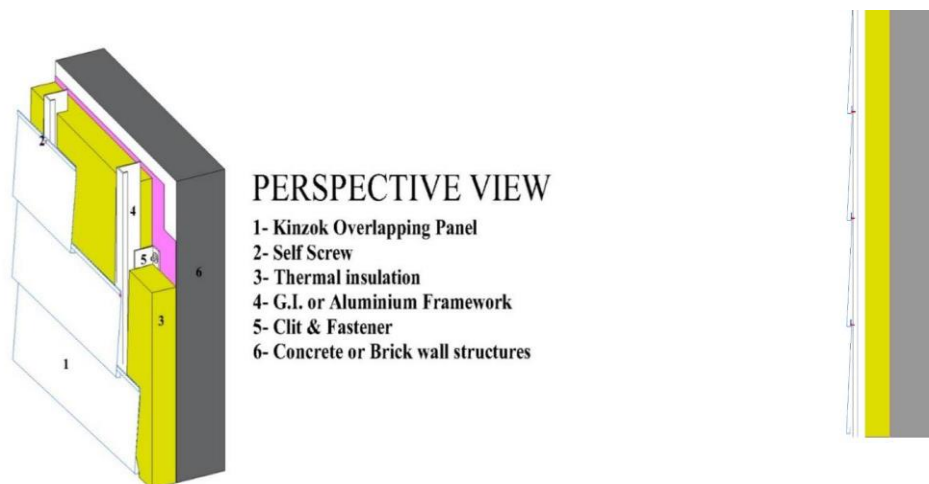
Pictorial Representation of Monolock Panel



iii. Flaplock Panel

Flaplock Panels are factory fabricated panels for Rain screen External / Internal Cladding fixed horizontally with the concealed screws using 0.80 mm Allu- Alloy. It gives a louver impression with standard center-to-center 200 mm with maximum length of 2400 mm fixed on Aluminum box section 50x25 mm fixed to the sub structure at the maximum distance of 750 mm.

Pictorial Representation of Flaplock Panel



1.3 Assessment

1.3.1 Scope of Assessment

The scope of assessment included suitability of specified KINZOK aluminum alloy panels for Rain screen cladding & ceiling applications in various building types such as residential, industrial, commercial, school etc.

1.3.2 Basis of Assessment

The assessment of the component is based on the followings;

- i. The Mechanical (Tensile Strength) & Chemical Properties (Elements & Concentration) of the Aluminium alloy sheet by Third Party Laboratory (M/s Indiana Test, Calibration & Certification Services, Mohali, Punjab).
- ii. Quality Assurance Plan adopted by PAC Holder.
- iii. The installation of the panels undertaken in various Building structures/ Projects.
- iv. The visit of the Fabrication Unit at Greater Noida, U.P., interaction with Technical Personnel, review of manufacturing facility & quality control through Video conferencing.

1.4 Uses of KINZOK Aluminium Alloy Panels

1.4.1 Uses of the Component

The panels are used for External / Internal Rain Screen cladding and false ceiling applications in various types of building structures.

1.4.2 Special Aspects of Use/Limitations

- i. Base structure shall have strength to structurally support the cladding system. The alignment of the face of the base structure should be within tolerable limits to support the cladding system.
- ii. Minimum 50 mm projection from base structure is required to maintain flow of air for a ventilating Facade/ Rain screen cladding.

1.5 Conditions of Certification

1.5.1 Technical conditions

- i. Technical Specifications- Raw materials and the finished product shall conform to the requirements of prescribed specifications.
- ii. The external/internal cladding & ceiling panels shall be structurally integrated to the base structure. The design assumptions, calculations, references if any and design drawings including connection details of the cladding shall be made available on demand if required. The cladding system shall withstand wind forces (including debris), seismic loads, and other forces/loads as applicable as per relevant Indian Standards. The installation of cladding system shall be undertaken by trained persons only with technical support or supervision by qualified engineers.
- iii. As regards, cavity space between aluminium panel and substructure becoming the breeding space for rodents/pests, it is maintained by the Agency that the air ventilation in cavity removes the moisture and thus prevents the survival of insects/rodents. However, this aspects need to be observed in such installation with passage of time and suitable safeguard required, if any, are to be taken.
- iv. The minimum thickness of the panel and structural support needs to be ensured to safeguard the panels from tattering / denting / damage & noise.
- v. The agency needs to ensure / maintain the coating quality so that there is no difference in colour /appearance between sun exposed surface and unexposed one after sustained use/within stipulated service life period of coating.
- vi. The Certificate Holder shall provide all required technical details for application of this component to user agencies.
- vii. Quality Assurance- the Certificate holder shall maintain a quality assurance system in accordance with Quality Assurance Plan.

1.5.2 Handling of User Complaints

The Certificate holder shall provide quick redressal to consumer/user complaints proved reasonable & genuine and within the conditions of warranty provided by it to customer/purchaser.

As part of PACS Certification, it shall maintain data on such complaints with a view assess the complaint satisfaction and suitable preventive measures taken.

1.6 Certification

On the basis of assessment given in Part-3 of this Certificate & subject to the conditions of certification, use & limitations set out in this Certificate and if selected, installed & maintained as set out in Part-1 & Part-2 of this Certificate, the KINZOK Aluminium Alloy Panels are fit for use as set out in the Scope of Assessment.

PART 2: CERTIFICATE HOLDER'S TECHNICAL SPECIFICATION

2.1 General

2.1.1 The PAC holder shall manufacture these panels in accordance with the requirements specified in the relevant Standards (see Part 5). In addition, it shall follow the company standards specifying the requirements of various materials used in the manufacturing of the panels.

2.2 Specifications of the Component

The Agency shall only use the raw materials supplied with the relevant documents as laid down in the prescribed Quality Assurance Plan. The raw materials shall be subject to agreed controls and tests by the agency before acceptance.

2.2.1 Technical Specification of Raw Material

Aluminum alloy (8010) sheet is used as raw material, having aluminium as the major element, and silicon, zinc, copper, titanium and manganese as minor elements.

Table 1 Specification for Raw material (Mechanical Properties)

Technical Specification	U. T. S (kg/sqm)	Elongation (%)
Aluminium Alloy Sheet	Min. 10.7	Min. 5

Table 2 Specification for Raw material (Chemical Composition)

Chemical Composition	Weight Percentage (%)
Aluminium	≥ 97.3
Silica	≤ 0.56
Zinc	≤ 0.05
Copper	≤ 0.05
Titanium	≤ 0.02
Manganese	≤ 0.08
Magnesium	≤ 0.03
Ferrous	≤ 0.74

2.2.2 Performance requirements of the Component

The performance requirements of the component are as per the details below;

Table 3 Performance requirements of the Component

S. No.	Performance Characteristics	Requirements with tolerances, if any	Test / Acceptance Method
1	2	3	4
1	Dimensional Stability	Thickness of .8 mm (Min.) to 1.4 mm to make it dimensionally stable thickness to size ratio.	Random testing after Production
2	Coating performance	10 years warranty if not hampered intentionally	Qualicoat Specifications, 2022
3	Fire Performance	Class A-1 if used in bare form and A-2 with Coating	Basic Properties of Aluminium Alloy
4	Ventilating Facade System	Minimum 50 mm projection from the base structure to maintain Flow of Air.	

2.3 Special features of the component

- i. Aluminium is one of the most recyclable materials. The recycling of aluminium reduces significant amount of energy & proportionate greenhouse gas emission as compared to processing of virgin raw material.
- ii. Aluminium cladding does not need frequent maintenance resulting in cost saving & ecological advantages.
- iii. It protects the base structure from direct exposure of harsh climate, thus improving its longevity.
- iv. These panels act as Rain screen facade which through natural air ventilation system brings some advantage in terms of thermal efficiency in the buildings.

2.4 Manufacturing Process

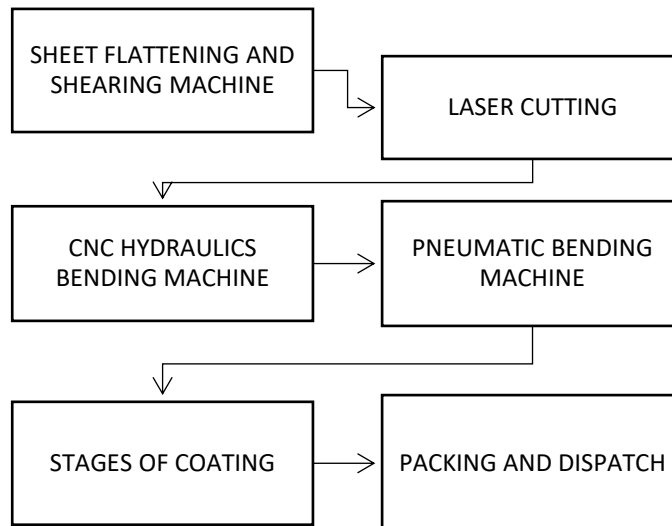
2.4.1 List of Manufacturing/Installing Machinery/Equipment available with Agency

Table 4

S. No.	Date of installation	Name of machine & ID No.	Make	Capacity	No. of machine	Maintenance schedule
1	2	3	4	5	6	7
1.	2020	CNC Hydraulic Machine	Hindustan Hydraulic	100 Metric ton capacity, 3 meter panel	1	Once in the Month
2.	2020	3 mt. Manual Bending Machine	Systle, Germany	3 mt	1	Quarterly
3.	2020	1mt. Segmented Bending Machine	Systle, Germany	1 mt.	1	Quarterly
4.	2020	Emtex Laser Cutting	Emtex	3 mt x 1.4 mt.	1	Quarterly
5.	2020	CNC Straightening and Shearing Machine with D-collar	Hindustan	2 ton	1	Quarterly
6.	2020	Power Press	Punjab Machine	20 ton	1	Quarterly
7.	2020	Pneumatic Bending Machine		3 mt 10 mt		Quarterly

2.4.2 Manufacturing Process

Process flow chart is given below;



2.4.3 Manufacturing Machines details including Process

i. Sheet Flattening and Shearing Machine

This process creates precise cuts through automated control as the material moves through the shear machine. Cutting blades come together in order to fracture the material into separate smaller pieces. This process creates quality clean cuts that can be repeated quickly.



ii. CNC Hydraulics Bending Machine

CNC bending, also called CNC forming, is the process whereby sheet metal is reshaped from a flat form. Using CNC bending technology, any component design can be produced. It can create 90-degree bend transforming a flat piece of metal into an 'L' shaped bracket.



iii. Pneumatic Bending Machine

The machine makes use of a pneumatic control valve to operate the machine. The user may use the valve using his/her thumb to control a joystick. The valve button when pressed/moved drives pressure through the cylinder thus pressurizing and pushing the tool against the other V tools. This bends the sheet between the tools as per required angle.



iv. Laser Cutting

This laser cutting is done for achieving precise configuration to match architectural design requirement of panels. The process is directed by optics and computer numerical control (CNC) technology.



v. Stages of Coating

Stage 1

The panels are finished with powder coating with antimicrobial properties with new international standards that poses no health hazard.

Stage 2

Sublimation: the process of sublimation is done on the panels which give it the distinct look as well as acts like a protective layer over the powder coating or the base color to achieve the desirable shade.



vi. Packaging and Dispatch

After fabrication of the panels, the same are packaged to protect & ship it safely to destination.



2.5 Installation Procedure

2.5.1 Preliminaries

- Check that the panel support structure is in level
- Position the panel near the point of use
- Prepare the scaffolding 450 mm away from the structure
- Comply with the safety norms of the workplace
- Ensure that all the workers are equipped with individual safety equipment according to the law of the land
- Prepare all the power supply lines for tools according to current regulations
- Mobilize the panel lifting vehicles

2.5.2 Facade /Ceiling Installation

i. Dovetail System

- First the Plum level of the substructure is verified and the needful marking on the substructure is done for fixing the 2mm “L” angle of 38x38mm or the size as may be required. A standard 50 mm cavity is provided. For any other cavity, customized angle is required to be provided.
- After verifying the plum “L” angle has to be fixed on the sub- structure with the 100x8 mm fastener or chemical fastener in case of Hollow blocks sub structure at the distance maximum of 750 mm for vertical fixing of Aluminum Framework.
- After fixing the “L” angle Aluminum Box section of 50x38x1.2 mm has to be fixed vertically with 38x25 mm self-taping screw.
- Once all box sections are fixed, the plum level of the grid is checked again.
- After fixing the box section the flashing (Aluminium C Channel) is fixed all along the periphery of the facade or ceiling as the case may be.
- Once the flashing is fixed, the first panel from the top or bottom as the design may require is inserted into flashing fixed on the periphery other side of the panel may be screwed on the aluminium section and the next panel as per the drawing is then inserted into the interlock cavity of the first panel and other side shall be screwed as the first one and accordingly similar sequence has to be followed for rest of the panel depending upon the drawing details.

ii. Monolock Panel

- First the Plum level of the substructure is verified and the needful marking on the substructure is done for fixing the 2mm “L” angle of 38x38mm or the size as may be required. A standard 50 mm cavity is provided. For any other cavity, customized angle is required to be provided.
- After verifying the plum “L” angle has to be fixed on the sub- structure with the 100x8 mm fastener or chemical fastener in case of Hollow blocks sub

structure at the distance maximum of 750 mm for vertical fixing of Aluminum Framework.

- After fixing the “L” angle Aluminum Box section of 50x38x1.2 mm has to be fixed vertically with 38x25 mm self-taping screw.
- Once all box sections are fixed, the plum level of the grid is checked again.
- A layer of decking sheet: Zinalume -AL-ZN alloy coated (55% Aluminum 43.5%Zinc,1.5% Si) steel Profile sheet of .47 mm total coated thickness, minimum Al-zn alloy coating of 150 gsm total on both side having nominal 3.5 mm deep ribs at pitch of nominal 48 mm center to center or as recommended by the manufacturer. Make of zinalume profile sheet: TATA BLUE SCOP/Jindal jsw / Safintra. The yield strength of the sheet shall be 550 MPa. The decking sheet shall be fixed over Aluminum Box Section with Rivets in the number & sizes keeping in view the overall structural safety / stability of the system as recommended by the manufacturer.
- After fixing the Decking sheet over box section fix the flashing all along the periphery of the facade or ceiling as the case may be.
- Monolock fixing System requires fixing of 0.5 mm thick G.I. fixing clip.
- Each Monolock System requires clips on all sides. For fixing these clips, a continuous support i.e., a decking sheet is required at the base.
- While fixing the” KINZOK” panel under Monolock system it must be ensured there is no protruding element on the support i.e., screw /nails that may damage the underside of the panel.
- The support should meet the loading requirement per the relevant National Standards. In order to take care of major loads due to wind velocity which may occur in some parts of the building the fixing clips can be increased.

iii. Flap Lock System

- First the Plum level of the substructure is verified and the needful marking on the substructure is done for fixing the 2mm “L” angle of 38x38mm or the size as may be required. A standard 50 mm cavity is provided. For any other cavity, customized angle is required to be provided.
- After verifying the plum “L” angle has to be fixed on the sub- structure with the 100x8 mm fastener or chemical fastener in case of Hollow blocks sub structure at the distance maximum of 750 mm for vertical fixing of Aluminum Framework.
- After fixing the “L” angle Aluminum Box section of 50x38x1.2 mm has to be fixed vertically with 38x25 mm self-taping screw.
- Once all box sections are fixed, the plum level of the grid is checked again.
- These panels are installed horizontally.
- These panels give louver effect.
- Slandered center-to-center width would be 200 mm.
- Thickness of “KINZOK FLAPLOCK panel will be 0.8 mm.

The fixing details of various panels are given at **Anexure-2**.

2.6 Skill Requirement at Site

The “KINZOK” Panels shall be installed under the direct supervision of trained personnel of the Manufacturer or Manufacturer authorized Agencies only.

2.7 Inspection & Testing at Plant

Inspections & testing shall be done at appropriate stages of the manufacturing process. The inspected panels shall be stored & packed to ensure that no damage occurs during transportation. As part of quality assurance, regular inspections shall be carried out by the trained personnel of the PAC holder.

2.8 Guarantees / Warranties provided by the PAC holder

The PAC Holder shall provide necessary guarantees/ warranties.

2.9 Services provided by the PAC holder to the Customer

The PAC holder shall provide pre-sale advisory regarding the component. Customer/user may obtain from the PAC holder details of the advice that may be provided to him.

The PAC holder shall also provide after sales service on customer to customer basis. Users / Customers shall ascertain from the PAC holder the type of services and the conditions, the PAC holder is prepared to provide.

2.10 Responsibility

- Specific Design Using the KINZOK Panels is the responsibility of the Designer with the instruction, supervision and guidance of the PAC holder.
- Quality of installation of the system on the site is the responsibility of the trade person engaged by the Client.
- Providing necessary facilities and space for movement of Cranes and Vehicle is the responsibility of the client / building developer.

PART 3: BASIS OF ASSESSMENT AND BRIEF DESCRIPTION OF ASSESSMENT PROCEDURE

3.1 Assessment

3.1.1 The technical assessment was done as per provisions of the Standard listed in Part 5 of the certificate.

3.2 Test Performed for Assessment

- I) The Mechanical (Tensile Strength) & Chemical Properties (Elements & Concentration) of the Aluminium alloy sheet by Third Party Laboratory (M/s Indiana Test, Calibration & Certification Services, Mohali, Punjab)

Tensile Test Result

Test Date : 08.05.2023
 Test Methods : ASTM A-370-2021
 Sample : Aluminum Sample 1 mm thick

S. No	Sample ID	Input data					Observed Values			
		Width (mm)	Thickness (mm)	Area (Sqm)	Initial Gauge Length (mm)	Final Gauge Length (mm)	T.S (MPa)	Y.S (MPa)	Elong. (%)	Maximum Force (N)
1.	T- 204637	12.43	0.97	12.057	50.00	53.63	158.8	138.679	7.26	1915

Element & Concentration, % (Aluminum)

Test Date: 09.05.2023
 Test Methods: ASTM E-1251-2017
 Sample: Aluminum Sample 1 mm thick

Element concentration	Value, %
Aluminum	97.9483

Elements & Concentration (Other Metals in Aluminum Alloy), %

Test Date: 09.05.2023
 Test Methods: ASTM E-1251-2017
 Sample: Aluminum Sample 1 mm thick

Chemical composition	Concentration (%)
Si	0.324
Fe	0.863
Cu	0.180
Mn	0.351
Mg	0.129
Cr	0.0290
Ni	0.0136
Zn	0.0945
Ti	0.0250
Pb	0.00413
Sn	<0.0100

ii The test certificate issued by M/s Virgo Aluminum Ltd.

Product : GEQ (Sheets) - (1.22/1.40xWxL) mm

Test Results

Test Parameters	U.T.S (Kg/sqmm)	Elongation (%)
Actual Value	16.00	5.00-7.00

Chemical composition	Si	Fe	Mn	Mg	Cu	Zn	Ti	Al
Concentration (%)	0.20	0.61	0.35	0.14	0.11	0.14	0.02	98.3

- 3.3** Quality Assurance system followed by the Certificate holder is at **Annexure 1**. As the present Quality assurance plan is not exhaustive, the Agency is advised to improve the Quality assurance plan in due course of time.
- 3.4** Site inspection: The setup of the Agency was visited/inspected by the technical Officers of BMTPC via video conferencing on May 26, 2023 & interaction were held with technical personnel of the Agency. The agency presented/ demonstrated the entire production process, testing results, quality assurance mechanisms, etc.

3.5 Execution of Projects

The details submitted regarding the Supply & installation of panels are as per the details given below;

S. No.	Name of Party	City	Year	Product	Design	Qty. in Sqft.
1.	Jitender Builder	A-37, Preet Vihar, Delhi	2023	Kinzok	Standing Seem	627.00
2.	JSK Enterprises	Vasant Vihar, Delhi	2022	Kinzok	Dovetail	3266.15
3.	Puneet Suri Builder	Preet Vihar, Delhi	2022	Kinzok	Monolock	406.00
4.	Micro Machines	Sector-14, Faridabad	2022	Kinzok	Louvers	848 Rft.
5.	Karma Relaty	Gurugram	2021	Kinzok	Dovetail	1399.00
6.	Kamakhya infracon pvt. Ltd	Hauz Khas Enclave, Delhi	2020	Kinzok	Dovetail	861.00
7.	XLRI	Jhajjar	2020	Kinzok	Dovetail	4951.00
8	Sparkle one mall	Bangalore	2023 (under installation)	Kinzok	Monolock	12000

Facade & Ceiling Applications



PART 4: STANDARD CONDITIONS

This certificate holder shall satisfy the following condition:

- 1 The certificate holder shall continue to have the product reviewed by BMBA.
- 2 The Product shall be continued to be manufactured according to and in compliance with the manufacturing specification and quality assurance measures which applied at the time of issue or revalidation of this certificate. The scheme of quality Assurance separately approved shall be followed.
- 3 The Quality of the Product shall be maintained by the certificate holder.
- 4 The Product user should install, use and maintained the product in accordance with the Provisions in the certificate.
- 5 The certificate does not cover uses of the Product outside the scope of this appraisal.
- 6 The Product is appraised against performance provision contained in the standard listed in part v. Provisions of any subsequent revisions or provisions introduced after the date of the certificate do not apply.
- 7 Where reference is made in this certificate to any Act of parliament of India, Rules & Regulation made there under, statutes specification, code of practices, standard etc. Of the bureau of Indian standard or any other or any other national standards body and the international organization for standardization, manufacturers company standard, instruction manual etc. Its shall be construed as reference to such publication in the form in which they were in force on the date of grant of this certificate.
- 8 The certificate holder agrees to provide to BMBA of their distributors / licensees whenever appointed by him and agrees to provide to BMBA a six-monthly update list thereof.
- 9 The certificate holder agrees to provide to BMBA feedback on the complaint received, the redressal provided, and the time taken to provide redressal on complaint-to-complaint basis as soon as redressal is provided. BMBA agrees to provide the certificate holder the user feedback received by it, if any.
- 10 If at any time during the validity Period PACH is unable to fulfill the condition in the PAC, he should at his own initiative suspend using the PAC and notify chairman, TAC the date from which he has suspended its use the reason for suspension and the Period by which he will be able to resume. He shall not resume without the prior permission of BMBA. He shall also inform simultaneously his agent, Licensees, distributors, institutional, government public sector buyers and all those whom he has informed about his holding the PAC. He shall also inform all those who buy his products during the period of suspension. He shall provide to BMBA at the earliest the list of who have been so informed by him.

- 11 In Granting this certificate, BMBA takes no position as to:
- The Presence or absence of patent or similar rights relating to the product.
 - The legal right of the performance holder to market, install or maintain the product.
 - The nature of the individual installation of the Product, including method of workmanship.
- 12 BMTPC and the Board of agreement of BMTPC (BMBA) take no position relating to the holder of the performance Appraisal Certificate (PAC) and the user of the performance Appraisal certificate respecting the patent right / copy right asserted relating to the product / system / Design / method of installation etc. covered by this PAC. Consideration relating to the patent/ Copy right are beyond the scope of performance Appraisal certificate scheme (PACS) under which this PAC has been issue. PAC and user of this PAC are expressly advice that determination of the claim? Validity of any such patent right / copy right and the risk of infringement of such right are entirely the responsibility of PACH on the one hand and that of user on the others.
- 13 It should be noted that any recommendation relating to the safe use of the Product which are contained or referred to in this certificate are the minimum standard required to be met with. When the product is installed used and maintained. They do not purport in any way to restate or cover all the requirement of related Act such as factory Act, or Any other statutory or common law duties of care, or Any duty of care which exist at the date of this certificate or in the future, nor is conformity with the provisions of this certificate to be taken as satisfying the requirement of related Act.
- 14 In Granting this certificate BMTPC and BMBA does not accept Responsibility to any person or body for any loss or damage, including personal injury, arising as direct or indirect result of the use of this product
- 15 The certificate holder indemnifies BMBA its officer and official involved in this assessment against any consequence of actions taken in good faith including contents of this certificate. The responsibility fully rests with the certificate holder and the user of the Product.
- 16 The responsibility for conformity to condition specified in the PAC lies with the manufacturer who is granted this PAC. The board (BMBA) will only consider request for modification or withdrawal of the PAC.
- 17 The PAC holder shall not use this certificate for legal defense in case against him or for legal claims he may ask from others.

Place: New Delhi
Date of issue: 17.07.2023



Chairman TAC & for and on behalf of
Member Secretary, BMBA


PART 5: LIST OF APPLICABLE STANDARDS AND CODES

- 5.1 **Standards:** These standards are referred for carrying out particular tests only & do not specify the requirement for the whole product as such.
- i. IS 10259 -1982 (Reaffirmed:2020), General condition of delivery and inspection of aluminium and aluminium alloy products
 - ii. International Alloy Designation & Chemical Composition Limits For Wrought Aluminium & Wrought Aluminium Alloy, January 2015
 - iii. ASTM A-370- 2021 Standard Test Methods and Definitions For Mechanical Testing of Steel Products
 - iv. ASTM E-1251-2017 Standard Test Method for Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry
 - v. QUALICOAT Specification, 2022 (For Coating)
- 5.2 **Company Standards of PAC Holder** – The PAC Holder has to also make available the Company Standards to the consumers according to which testing has been done.

CERTIFICATION

In the opinion of Building Materials & Technology Promotion Council's Board of Agreement (BMBA), **Kinzok Aluminum Alloy Panels** is satisfactory if used as set out above in the text of the Certificate. This Certificate PAC No. 1067-C/2023 is awarded to **M/s Shree Manik Industries Pvt. Ltd., Gautam Budha Nagar, U.P.**

The period of validity of this Certificate is for a period of one year i.e. from **17.07.2023 to 16.07.2024** as shown on Page 1 of this PAC. This Certificate consists of pages 1 to 29.


Dr. Shailesh Kr. Agrawal
Chairman, TAC
& Member Secretary, BMBA
Building Materials and Technology Promotion Council
Ministry of Housing and Urban Affairs, Govt. of India
Core 5A, 1st Floor, India Habitat Centre
Lodhi Road, New Delhi-110003



On behalf of BMTPC Board of Agreement Chairman, Technical Assessment Committee (TAC) of BMBA & Member Secretary, BMTPC Board of Agreement (BMBA) Under Ministry of Housing and Urban Affairs, Government of India

Place: New Delhi, India
Date: 17.07.2023

PART 6: LIST OF ABBREVIATIONS

BMBA	Board of Agreement of BMTPC
BMTPC	Building Materials and Technology Promotion Council
CPWD	Central Public Works Department
ED	Executive Director of BMTPC
IO	Inspecting Officer
MS	Member Secretary of BMBA
PAC	Performance Appraisal Certificate
PACH	PAC Holder
PACS	Performance Appraisal Certification Scheme
SQA	Scheme of Quality Assurance
TAC	Technical Assessment Committee (of BMBA)

Performance Appraisal Certification Scheme - A Brief

Building Materials & Technology Promotion Council (BMTPC) was set up by the Government of India as a body under the Ministry of Housing & Urban Poverty Alleviation to serve as an apex body to provide inter-disciplinary platform to promote development and use of innovative building materials and technologies laying special emphasis on sustainable growth, environmental friendliness and protection, use of industrial, agricultural, mining and mineral wastes, cost saving, energy saving etc. without diminishing needs of safety, durability and comfort to the occupants of buildings using newly developed materials and technologies.

During the year's government, public and private sector organizations independently or under the aegis of BMTPC have developed several new materials and technologies. With liberalization of the economy several such materials and technologies are being imported.

However, benefits of such developments have not been realized in full measure as understandably the ultimate users are reluctant to put them to full use for want of information and data to enable them to make informed choice.

In order to help the user in this regard and derive the envisaged social and economic benefits the Ministry of Housing & Urban Poverty Alleviation has instituted a scheme called Performance Appraisal Certification Scheme (PACS) under which a Performance Appraisal Certificate (PAC) is issued covering new materials and technologies. PAC provides after due investigation, tests and assessments, amongst other things information to the user to make informed choice.

To make the PACS transparent and authentic it is administered through a Technical Assessment Committee (TAC) and the BMTPC Board of Agreement (BMBA) in which scientific, technological, academic, professional organizations and industry interests are represented.

The Government of India has vested the authority for the operation of the Scheme with BMTPC through Gazette Notification No. 1-16011/5/99 H-II in the Gazette of India No.49 dated 4th December, 1999.

Builders and construction agencies in the Government, public and private sectors can help serve the economic, development and environmental causes for which the people and Government stand committed by giving preference to materials and technologies which have earned Performance Appraisal Certificates.

Further information on PACS can be obtained from the website:
www.bmtpc.org

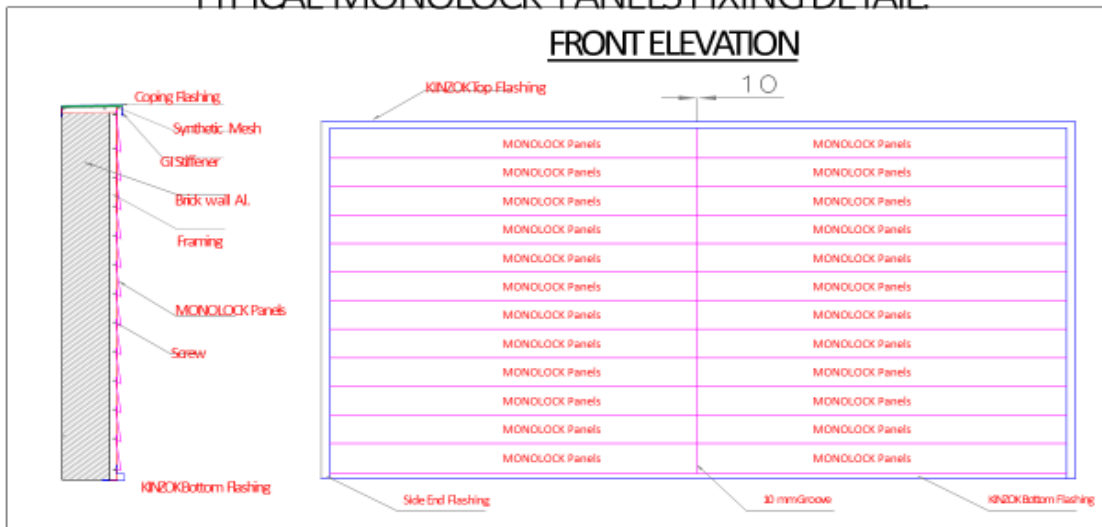
Annexure-1

Quality Assurance Plan

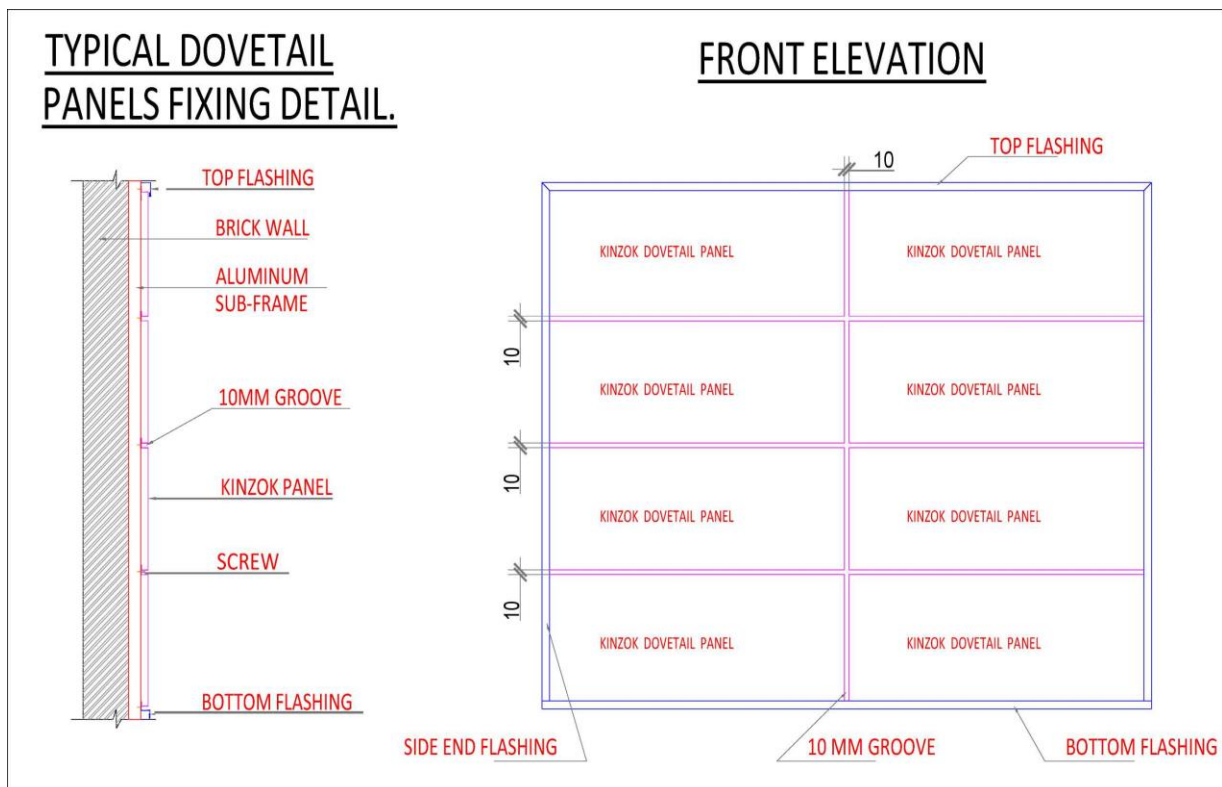
1. For Quality assurance, there is a dedicated team of experts available with the Agency.
2. As first step, each lot of raw materials is received with proper Quality check. Any defective raw material / not conforming to the standard, is returned back to the supplier.
3. At the stage of manufacturing, the finish products are checked for the workmanship. Any defective pieces of the production are rejected.
4. The process from flattening to the final fabrication of panel is done on CNC based machines to ensure quality production.
5. The CNC based machines are periodically (after 90 days) checked and software is regularly updated.
6. Random batch testing/ quality measures are undertaken, as per the performance requirements of the component.
7. Precautions to be taken while handling/storage of the panels:
 - All finished panels come with heavy-duty protective bubble wrapping to protect it against damage and defect during transportation and storage.
 - The finished material shall be placed on flat & rigid surface.
 - The material shall be stored in well ventilated & dry warehouse with the constant temperature to avoid condensation.
 - It is advisable to store the material in its original packing which should be removed only at the time of installation.
 - Storage time at the building site should be minimum as longer time may result in to mishandling / repeated shifting of location of the material which may damage the panels.
 - Care should be taken to avoid bumping and snatching of the panels when lifting.

Annexure-2

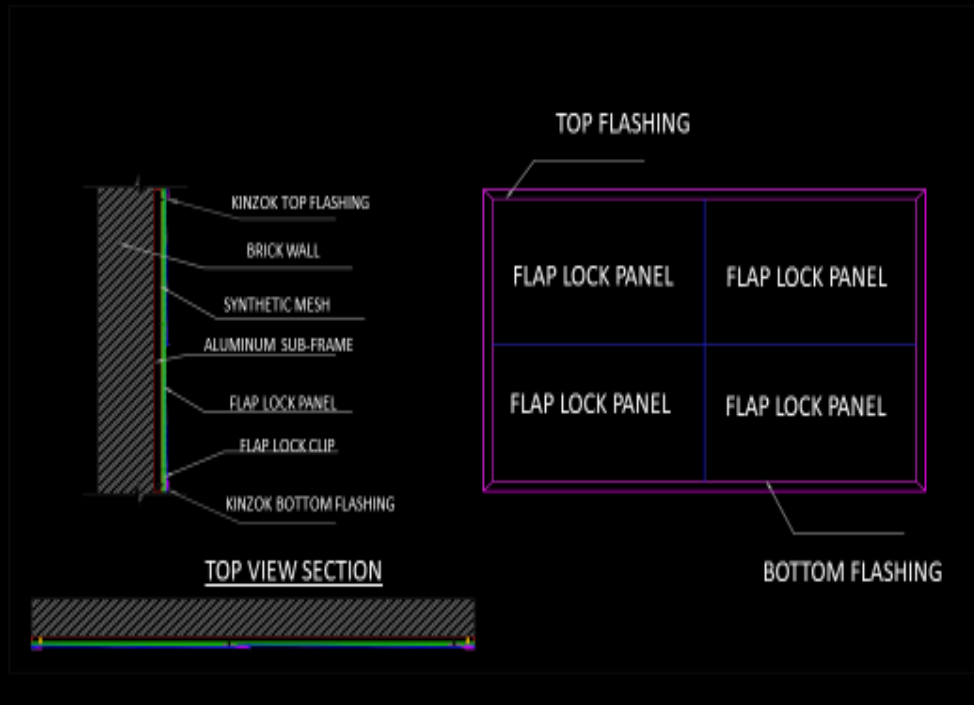
TYPICAL MONOLOCK PANELS FIXING DETAIL



TYPICAL DOVETAIL PANELS FIXING DETAIL.



TYPICAL FLAP LOCK PANELS FIXING DETAIL FRONT ELEVATION



Panel Junction details

Corner Jointing of panels including V- flashing over C-flashing, with aluminum box section as vertical support along with L clip, as per the details given below;

i. 'L' Junction:

