

**PRODUCTION AND SPECIFICATION DATA
FOR
DONGSHIN ALUMINUM HONEYCOMB CORE**



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C O N T E N T S

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- 2) ALUMINUM FOIL INSPECTION
- 3) CORE INSPECTION REPORT
- 4) MIDDLE INSPECTION REPORT FOR PRINTING, STACKING,
PRESSING AND CUTTING

1. Production specification & size of Al. Honeycomb Core

1.1. RAW MATERIAL

1.1.1. Aluminum Foil

- 1) Aluminum Honeycomb Core shall be made with aluminum foil which can meet the regulated properties of aluminum honeycomb core.
- 2) The inspection for the aluminum foil shall be carried out by every lots through Mill certificate of aluminum foil and lab tests.

1.1.2. Adhesives

- 1) The adhesives for node shall be met the required properties of final product, honeycomb core.
- 2) The blending ratio, viscosity, etc shall be inspected and checked by every lots.

1.2. SIZES

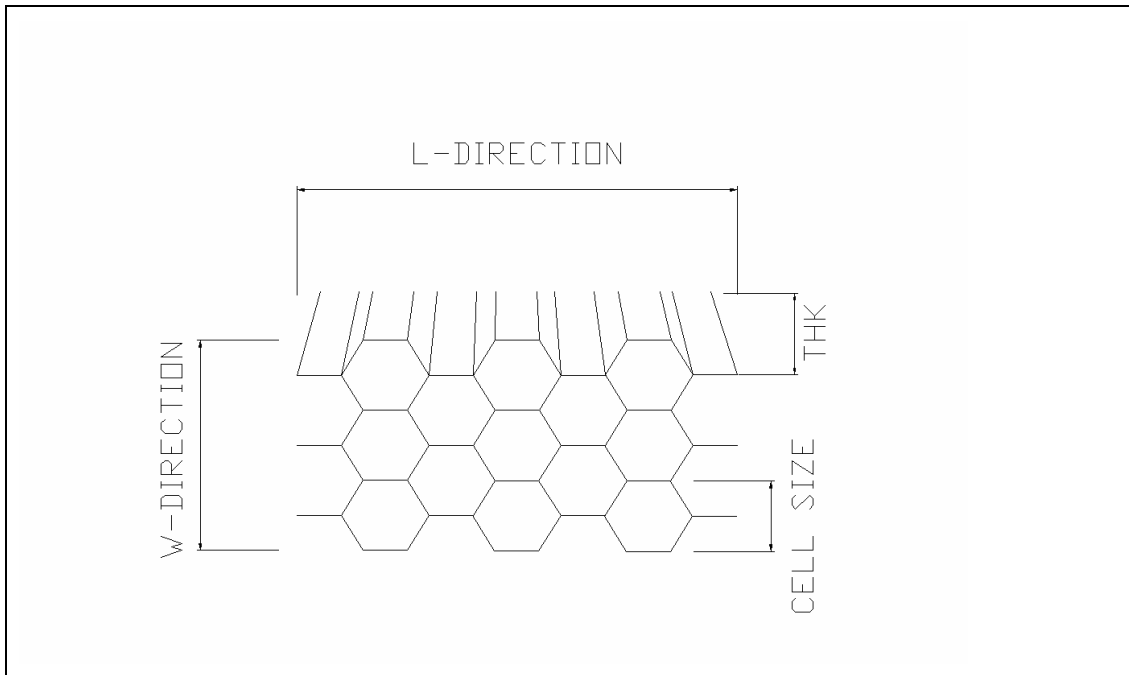
1.2.1. L-Dimension : Measured in ribbon direction

1.2.2. W-Dimension : Measured in vertical direction

1.2.3. T-Dimension : Measured in Core's upper to lower

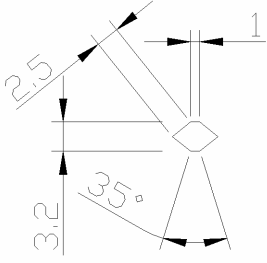
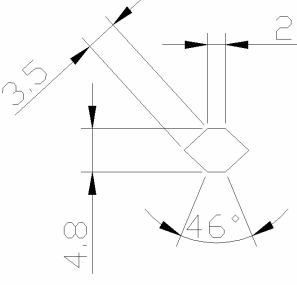
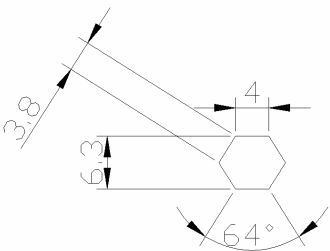
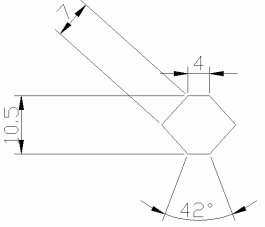
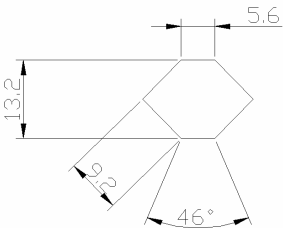
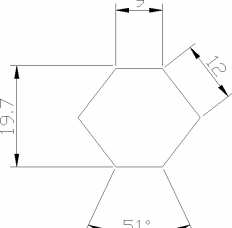
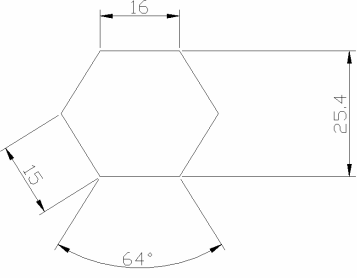
1.2.4. Cell Size : Distance from one side of node adhered face to parallel to opposite side when it measured in ribbon direction

1.2.5. Node : Adhered face between cells



1. Production specification & size of Al. Honeycomb Core

1.2. CELL SIZES

1/8"	3/16"
	
1/4"	3/8"
	
1/2	3/4"
	
1"	
	

1. Production specification & size of Al. Honeycomb Core

1.3. TOLERANCE

If there is specific requirement, the tolerances are regulated as following ;

1.3.1. Density : $\pm 10\%$

1.3.2. Cell Size : $\pm 10\%$

1.3.3. Core Thickness :

Under 4" : $\pm 0.006''$

Over 4" : $\pm 0.06''$

1.3.4. L-Dimension : +2 / -0

1.3.5. W-Dimension : +4 / -0

1.3.6. Core Angle :

Ribbon Direction : $\pm 10^\circ$

Cell Axis : $\pm 5^\circ$

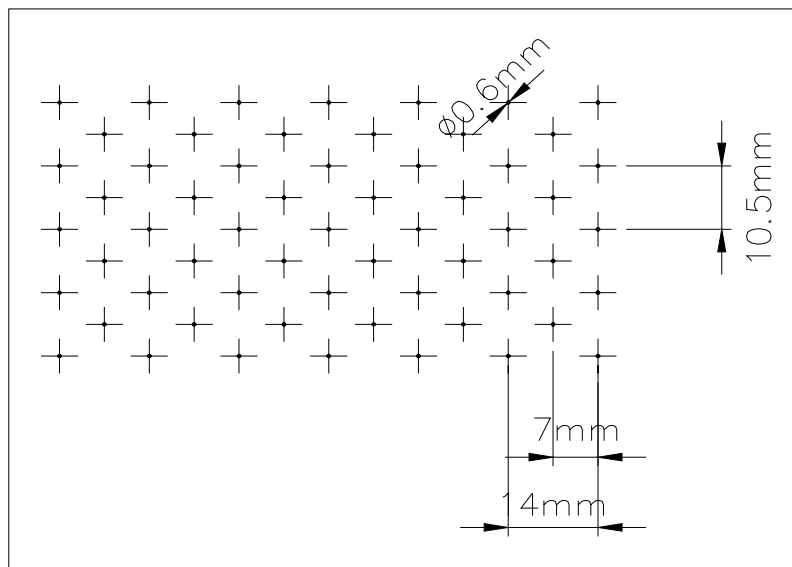
1.3.7. Aluminum Foil

1) 0.0023"(60micron) : 0.0018 ~ 0.0029"

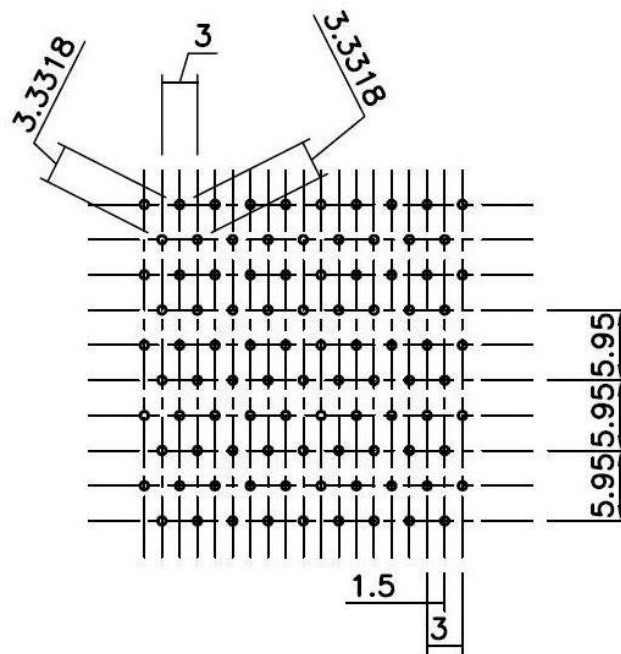
2) 0.00275"(70micron) : 0.0025 ~ 0.0034"

3) 0.0031"(80micron) : 0.0027 ~ 0.0042"

1.4. PERFORATION SIZE



Pin Size & Distance(↓ Print Direction)

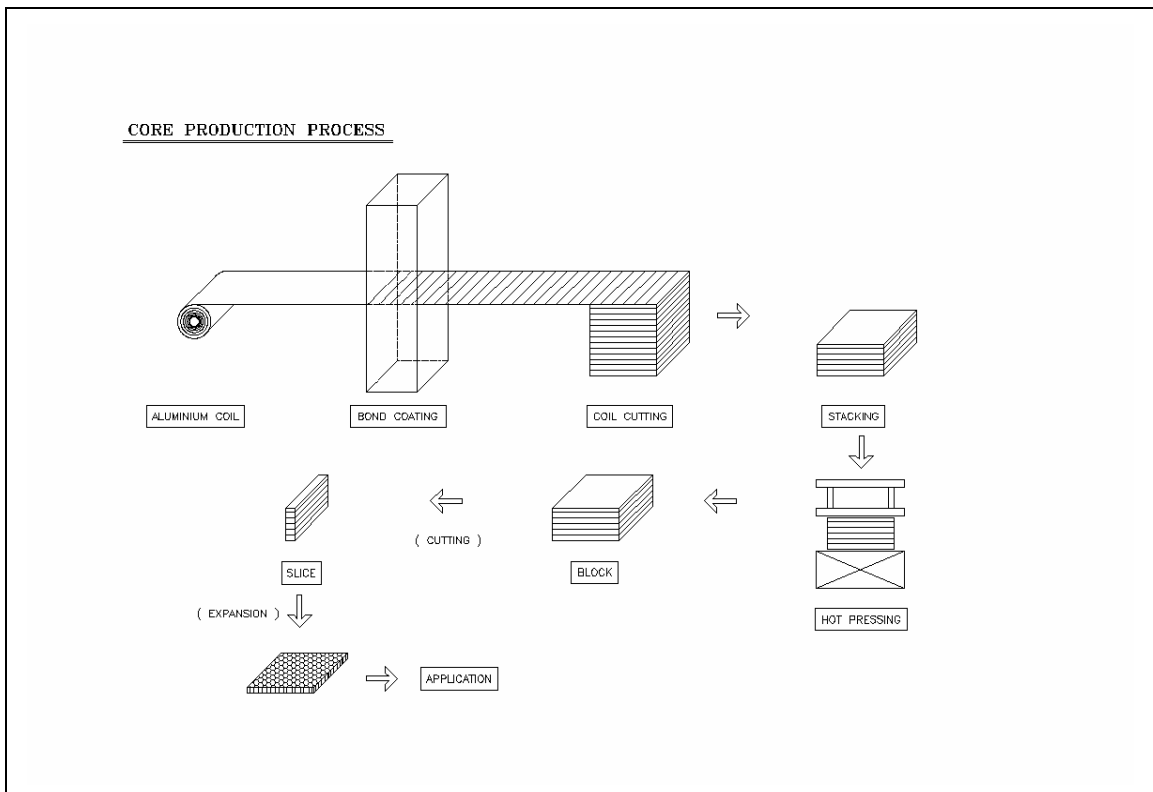


New Perforation Pin Distance

(Hole Size : 0.1 – 0.2mm)

2. Production Procedure

2.1. PRODUCTION PROCESS



2.1.1. PRINTING

- 1) To prepare the raw materials(aluminum foil node adhesives) according to the regulations.
- 2) To check and inspect the roll conditions
- 3) To check the working conditions
- 4) To operate according to Standard Work Manual.

2.1.2. STACKING

- 1) To program into computer for core block manufacturing
- 2) To input the data for Cell distance, length, the numbers of stacking layers, etc.
- 3) The inspector shall check the node status, foils' condition and remove the portions in non-qualified according to the selection standards for production in best quality.
- 4) In case there occur machinery problem or trouble, it shall be stopped and after the correct diagnoses from Engineering Team, it shall be operated in good conditions.

2. Production Procedure

2.1.3. HOT PRESSING

- 1) To operate according to the standard for perfect adhesive power of Core Node faces.
- 2) To control the handling the block in order to prevent the faces rocking from side to side in transportation from stacking into pressing line
- 3) To control the press time according to the manual by the thickness and cell size
- 4) To transport the completed block in good condition without any damages to Cutting line.

2.1.4. CUTTING

- 1) It requires thorough inspection because thickness tolerance may affect final production which applied the aluminum honeycomb core.
- 2) The status of saw teeth shall be always inspected.
- 3) To check whether the sawdust get caught in the saw or not
- 4) The thickness shall be checked with Vernier Caliper by lots and in case it over the required standard, after the correct diagnoses from Engineering Team, it shall be operated in good conditions.

3. Inspection Test Report

3. INSPECTION TEST REPORT

- 1) MILL CERTIFICATE
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INSPECTION CERTIFICATE

COMMODITY : ALUMINIUM FOIL

ALLOY & TEMPER : AA3003-H19


DATE : JAN.11.2005

CUSTOMER : HONEYSELL COMPOSITE CO. LTD.

NO.	LOT NO.	SIZE		TOTAL WEIGHT (kg/ROLL)	MECHANICAL PROPERTIES		JOINT (EA)	THICKNESS AVE. (μ)	REMARK
		THICKNESS (μ)	WIDTH (mm)		TENSILE STRENGTH (kg/mm ²)	ELONGATION (%)			
1	H-0111-01-13	70	609	350	32.5	3.4	0	70.8	
TOTAL				4,550			0		

CHEMICAL COMPOSITION

CASE NO.	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OTHERS		Aluminium
									EACH	TOTAL	
SPEC.	0.60 ↓	0.70 ↓	0.20 ↓	1.0~1.5	0.05 ↓	0.05 ↓	0.1 ↓	0.05 ↓	0.15 ↓		REM
H-0111-01-13	0.176	0.537	0.174	1.159	0.005	0	0	0.014	0.020		97.915

APPEARANCE	REMARKS
O.K	
MEASUREMENT O.K	

MANAGER OF QUALITY ASSURANCE SECTION

KOREA ALUMINIUM CO., LTD

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