



**ALUMINIUM**

**ALLOY INGOT**

*Registered  
Certificate*

*This is to certify that the  
Management Systems of*

*Manaksia Limited*

*have been assessed by  
International Certifications Ltd  
and found to comply with the requirements of*

*ISO 9001:2000*





Quality through Innovation  
&  
Engineering Excellence



**MANAKSIA LIMITED**, Flagship Company of the Manaksia Group is a multi location, light engineering Company in the field of metal packaging and other metal products. The inherent strength of the Company have been its sound technical competence and its ability to successfully implement backward integration.

Since its incorporation with limited liability, the Company responded to challenges by redefining its core competencies and unleashing a major restructuring process, as a result emerging into a stronger entity.



The "MANAKSIA" name today is a widely recognized and accepted brand in the metal packaging scene of India. During the last few years, the company has endeavoured to learn, adapt and respond quickly to the changing conditions in this increasingly competitive and fast paced global economy. As a result, at present Manaksia Limited is one of India's largest metal packaging companies and is presently the largest manufacturers of metal caps and closures in Asia, creating several core strengths within the organisation.

MAJOR PRODUCTS manufactured by the Company include Aluminium Rolled Sheets/Coils, Galvanised Steel Sheets/Coils, Roll On Pilfer Proof (ROPP) Closure for the premium liquor and pharmaceutical sectors. Crown Closures for the aerated water sector, Plastic Closure for the mineral water sector and Metal Containers for

shoe polishes and tea. Other products of the Company are Printed Metal Sheets, Printing Inks, Adhesives and Expanded Polyethylene Liners. The Company has diversified into the manufacture of Mosquito Repellent Coils for Reckitt Benckiser and Jyothy Laboratories, leveraging on its engineering skills and relationship strength. Today, it is the largest manufacturer of mosquito coils in World.

The Company has a subsidiary in Lagos, Nigeria under the name and style of MINL Limited, which has production facilities for Aluminium Closure and Crown Closures, catering to the liquor, pharmaceutical, beverage and soft drinks sectors in the West African markets. This is in addition to manufacturing facilities that the Company has setup at Ghana through another subsidiary, for manufacture of Steel Roofing Sheet.



Additionally, it has Regional Offices at Bangalore, New Delhi, Mumbai, Chennai, Hyderabad, Bhopal, Ahmedabad and Silvassa. Diverse manufacturing and marketing locations has enabled the group to provide better service to its customer.

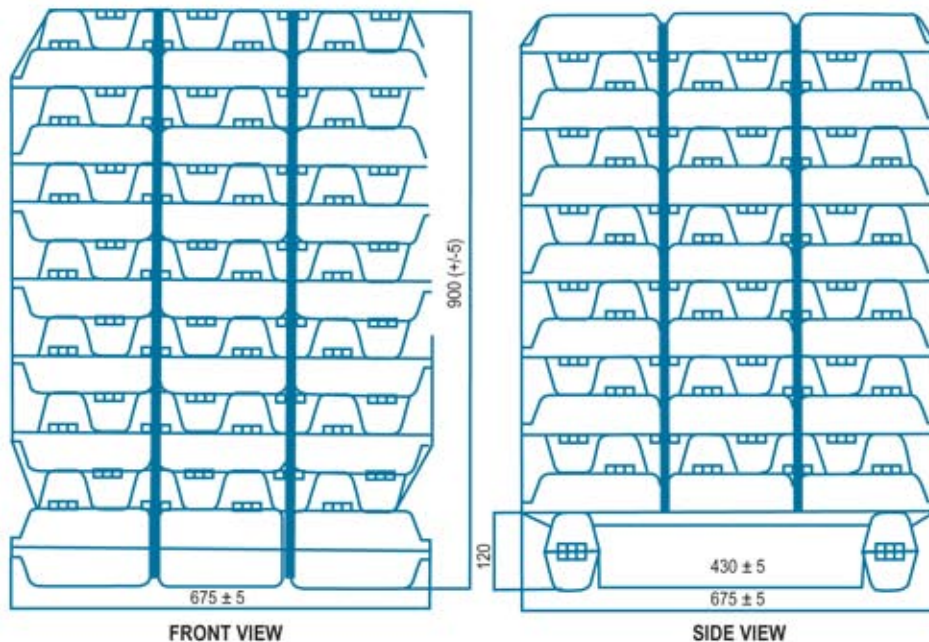
With 29 years experience in the Indian Metal Packaging and Aluminium, Manaksia Limited is now marketing ALUMINIUM ALLOY INGOT to serve in Steel and Automobile Industries. Aluminium special Alloy Ingot is manufactured out of virgin metal. Hence the quality is superior.

Aluminium Alloy Ingot is produced at our Bankura works near Durgapur, at our Kutch works in Gujrat and EOU unit at Haldia, West Bengal. The plants are

fully equipped with state of art converting equipments to ensure strict control on processing and testing lines for obtaining a product of an internationally acceptable quality for which the Company has also installed Spectro Meters in all the units.

With an enhanced aluminium alloy capacity of 2000 tns, we are poised to leverage the boom in Indias automobiles segment. It also works closely with brand-enhancing customer lite Hero Honda, Bajaj Auto, TVS Motor, Tata Motors to benchmark delivery in line with devolving requirements, leading to repeat orders.

We are also catering to international auto ancillary industries in Japan, Malaysia, Iran, Vietnam & many more.



### Ingot Packing Details

No. of ingot per bundle = 108 pcs (13 rows x 8 nos./row + 4 nos. at base)

Weight of Ingot = 5 kgs.  $\pm$  450 gms.

Weight per bundle = 540 Kgs.  $\pm$  5 kgs.

Each bundle shrink wrapped and strapped with flexible Polyester strips outside for reinforcement.

In 20 feet container 54 bundles stuffed.

App. weight = 29.160 MT.

- A few Ingot from every heat are subject to fracture test to ensure the homogeneous grain structure.
- Chemical composition analysis
- TC Drawn
- Test Bar Provided for Tensile Testing

## Quality Control Upgradation Plan

- Metallurgical Microscope



**SKELNER FURNACE**  
(Oil fired tilting type)



**INGOT**  
Casting Machine  
Conveyer





# S *ource of Raw Material*

**Virgin Metal**  
**NALCO**  
Angul, Orissa



## Scrap

Following steps are taken for sourcing scrap

Attachment like iron (fe) is restricted to 2-2.5% Alongwith minimum content of zn & mg.

Scrap is sourced from reliable dealer with quality guarantee.

At times, physical verification of scrap is carried through experienced team.

**Note : Each supply is accompanied with 'Test Certificate'**



	Si	Fe	Cu	Mn	Mg	Ni	Zn	Sn	Ti	Pb	Cr
AC1A	1.20max	0.50max	4.0-5.0	0.30max	0.15max	0.05max	0.30max	0.05max	0.25max	0.05max	0.05max
AC1B	0.20max	0.35max	4.2-5.0	0.10max	0.15-0.35	0.05max	0.10max	0.05max	0.05-0.30	0.05max	0.05max
AC2A	4.0-6.0	0.80max	3.0-4.5	0.55max	0.25max	0.30max	0.55max	0.05max	0.20max	0.15max	0.15max
AC2B	5.0-7.0	1.0max	2.0-4.0	0.50max	0.50max	0.35max	1.00max	0.10max	0.20max	0.20max	0.20max
AC3A	10.0-13.0	0.80max	0.25max	0.35max	0.15max	0.10max	0.30max	0.10max	0.20max	0.10max	0.15max
AC4A	8.0-10.0	0.40max	0.25max	0.3-0.6	0.3-0.6	0.10max	0.25max	0.05max	0.20max	0.10max	0.15max
AC4B	7.0-10.0	1.0max	2.0-4.0	0.50max	0.50max	0.35max	1.00max	0.10max	0.20max	0.20max	0.20max
AC4C	6.5-7.5	0.55max	0.25max	0.35max	0.25-0.45	0.10max	0.35max	0.05max	0.20max	0.10max	0.10max
AC4CH	6.5-7.5	0.20max	0.20max	0.10max	0.30-0.45	0.5max	0.10max	0.05max	0.20max	0.05max	0.05max
AC4D	4.5-5.5	0.60max	1.0-1.5	0.50max	0.45-0.60	0.20max	0.30max	0.05max	0.20max	0.10max	0.15max
AC5A	0.60max	0.80max	3.5-4.5	0.35max	1.30-1.80	1.7-2.3	0.15max	0.05max	0.20max	0.05max	0.15max
AC7A	0.20max	0.30max	0.10max	0.60max	3.5-5.5	0.5max	0.15max	0.05max	0.20max	0.05max	0.15max
AC8A	11.0-13.0	0.80max	0.8-1.3	0.15max	0.80-1.30	0.8-1.5	0.15max	0.05max	0.20max	0.05max	0.10max
AC8B	8.5-10.5	1.0max	2.0-4.0	0.50max	0.60-1.50	1.0max	0.50max	0.10max	0.20max	0.10max	0.10max
AC8C	8.5-10.5	1.0max	2.0-4.0	0.50max	0.60-1.50	0.50max	0.50max	0.10max	0.20max	0.10max	0.10max
AC9A	22.0-24.0	0.80max	0.5-1.6	0.50max	0.60-1.50	0.5-1.5	0.20max	0.10max	0.20max	0.10max	0.10max
AC9B	18.0-20.0	0.80max	0.5-1.6	0.50max	0.60-1.50	0.5-1.5	0.20max	0.10max	0.20max	0.10max	0.10max
ADC1	11.0-13.0	1.30max	1.0max	0.3max	0.3max	0.5max	0.5max	0.1max	—	—	—
ADC3	9.0-10.0	1.30max	0.6max	0.3max	0.4-0.6	0.5max	0.5max	0.1max	—	—	—
ADC5	0.3max	1.80max	0.2max	0.3max	4.1-8.5	0.1max	0.1max	0.1max	—	—	—
ADC6	1.0max	0.8max	0.1max	0.4-0.6	2.6-4.0	0.1max	0.4max	0.1max	—	—	—
ADC10	7.5-9.5	0.9max	2.0-4.0	0.5max	0.3max	0.5max	1.0max	0.3max	—	—	—
ADC10Z	7.5-9.5	1.3max	2.0-4.0	0.5max	0.3max	0.5max	3.0max	0.3max	—	—	—
ADC12	9.6-12.0	0.9max	1.5-3.5	0.5max	0.3max	0.5max	1.0max	0.3max	—	—	—
ADC12Z	9.6-12.0	1.3max	1.5-3.5	0.5max	0.3max	0.5max	3.0max	0.3max	—	—	—
ADC14	16.0-18.0	0.9max	4.0-5.0	0.5max	0.50-0.65	0.3max	1.5max	0.3max	—	—	—
DIN226	8.0-11.0	1.2max	2.0-3.5	0.1-0.5	0.1-0.5	0.3max	1.2max	0.1max	0.15max	0.2max	—
356	6.5-7.5	0.13-0.25	0.10max	0.05max	0.30-0.45		0.05max		0.20max		
356.1	6.5-7.5	0.5max	0.25max	0.35max	0.25-0.45	—	0.35max	—	0.25max	—	—
360.1	9.0-10.0	0.70-1.10	0.6max	0.35max	0.45-0.6	0.5max	0.4max	0.15max	—	—	—
380.1	7.5-9.5	1.0max	3.0-4.0	0.50max	0.1max	0.5max	2.9max	0.35max	—	—	—
383.1	9.5-11.5	1.0max	2.0-3.0	0.50max	0.1max	0.3max	2.9max	0.15max	—	—	—
A 413.1	11.0-13.0	1.0max	1.0max	0.35max	0.1max	0.5max	0.4max	0.15max	—	—	—
413.2	11.0-13.0	1.1max	0.1max	0.10max	0.07max	0.10max	0.10max	0.10max	—	—	—
413	11.0-13.0	2.0max	1.0max	0.35max	0.10max	0.50max	0.50max	0.15max	—	—	—
A 413	11.0-13.0	1.0max	1.0max	0.35max	0.10max	0.50max	0.50max	0.15max	—	—	—

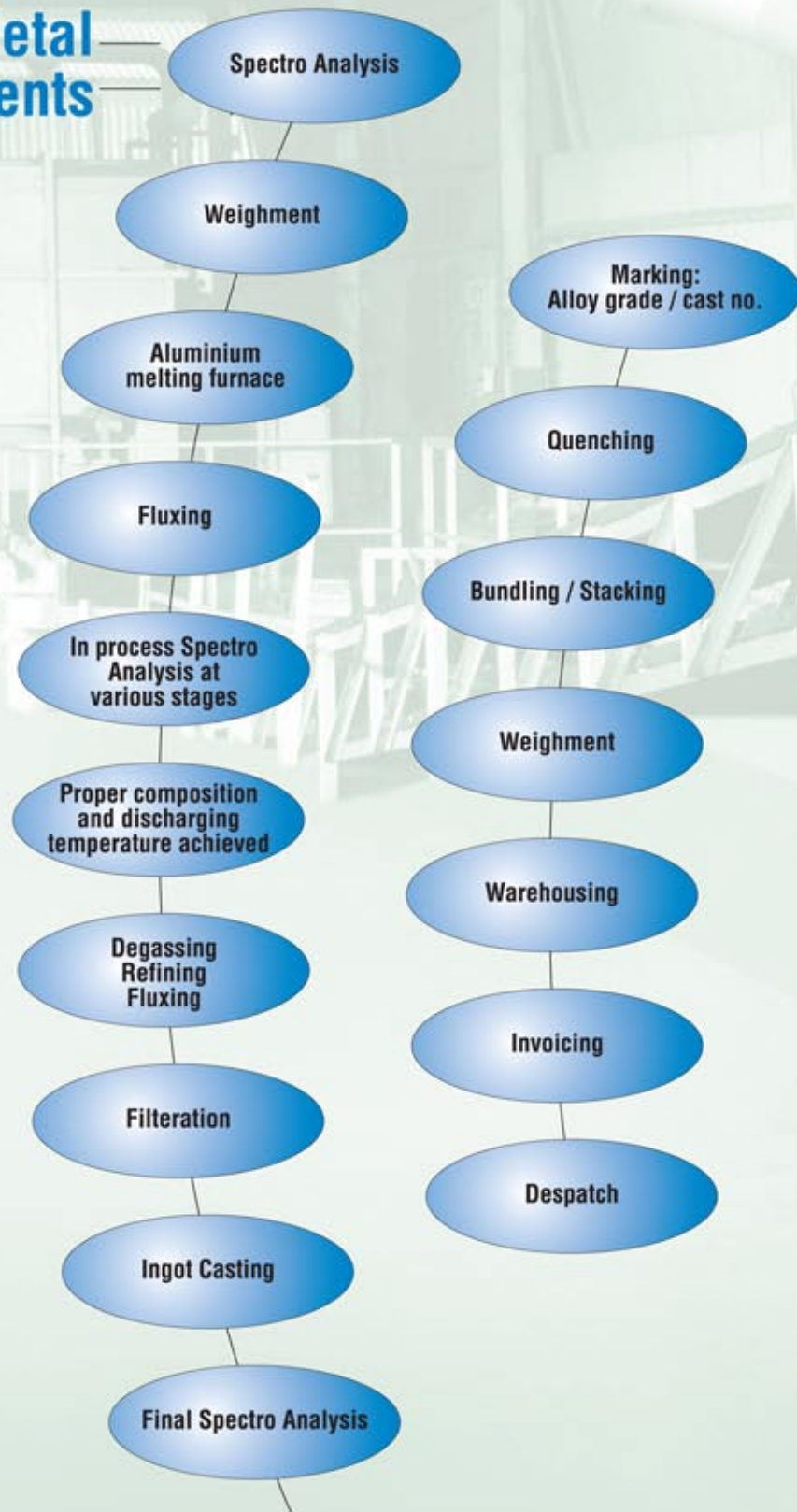
	Si	Fe	Cu	Mn	Mg	Ni	Zn	Sn	Ti	Pb	Cr
LM2	9.0-11.5	1.0max	0.7-2.5	0.50max	0.3max	0.5max	2.0max	0.20max	0.2max	0.30max	
LM4	4.0-6.0	0.8max	2.0-4.0	0.2-0.6	0.15max	0.3max	0.5max	0.10max	0.2max	0.10max	
LM5	0.3max	0.6max	0.1max	0.3-0.7	3.0-6.0	0.1max	0.1max	0.05max	0.2max	0.05max	
LM6	10.0-13.0	0.6max	0.1max	0.5max	0.1max	0.1max	0.1max	0.05max	0.2max	0.10max	
LM9	10.0-13.0	0.6max	0.1max	0.3-0.7	0.2-0.6	0.1max	0.1max	0.05max	0.2max	0.10max	
LM10	0.25max	0.35max	0.1max	0.1max	9.5-11	0.1max	0.1max	0.05max	0.2max	0.05max	
LM12	2.5max	1.0max	9.0-11	0.6max	0.2-0.4	0.5max	0.8max	0.10max	0.2max	0.10max	
LM13	10.0-12.0	1.0max	0.7-1.5	0.5max	0.8-1.5	1.5max	0.5max	0.10max	0.2max	0.10max	
LM16	4.5-5.5	0.6max	1.0-1.5	0.5max	0.4-0.6	0.25max	0.1max	0.05max	0.2max	0.10max	
LM18	4.5-6.0	0.6max	0.1max	0.5max	0.1max	0.1max	0.1max	0.05max	0.2max	0.10max	
LM20	10.0-13.0	1.0max	0.4max	0.5max	0.2max	0.1max	0.2max	0.10max	0.2max	0.10max	
LM21	5.0-7.0	1.0max	3.0-5.0	0.2-0.6	0.1-0.3	0.3max	2.0max	0.10max	0.2max	0.20max	
LM22	4.0-6.0	0.6max	2.8-3.8	0.2-0.6	0.05max	0.15max	0.15max	0.05max	0.2max	0.10max	
LM24	7.5-9.5	1.3max	3.0-4.0	0.5max	0.3max	0.5max	3.0max	0.20max	0.2max	0.30max	
LM25	6.5-7.5	0.5max	0.1max	0.3max	0.2-0.45	0.1max	0.1max	0.05max	0.2max	0.10max	
LM26	8.5-10.5	1.2max	2.0-4.0	0.5max	0.5-1.5	1.0max	1.0max	0.10max	0.2max	0.20max	
LM27	6.0-8.0	0.8max	1.5-2.5	0.2-0.6	0.3max	0.3max	1.0max	0.10max	0.2max	0.20max	
LM28	17-20	0.7max	1.3-1.8	0.6max	0.8-1.5	0.8-1.5	0.2max	0.10max	0.2max	0.10max	
LM29	22-25	0.7max	0.13-1.3	0.6max	0.8-1.3	0.8-1.3	0.2max	0.10max	0.2max	0.10max	
LM30	16-18	1.1max	4.0-5.0	0.3max	0.4-0.7	0.1max	0.2max	0.10max	0.2max	0.10max	

	Al	Cu	Zn	Mg	Si	
NOTCHED BAR	Grade I	93	4.5 max	1.0 max	—	1.5 max
	Grade II	97	2.0 max	0.5 max	0.5 max	—
CHEMICAL ANALYSIS OF THE ALUMINIUM	A s p e r I S 5 0 4 : 1 9 6 3					

*\*\* Note : Any other Alloy/Customer's specific compositions can also be manufactured.*



## Virgin Metal Alloying Elements



# Scrap

# ALLOY INGOT PLANT





**C**ustomers Spread All over India

**NORTHERN ZONE**



**WESTERN ZONE**



**EASTERN ZONE**



**SOUTH ZONE**



## FOR YOUR ENQUIRY PLEASE CONTACT

### REGISTERED OFFICE

8/1, Lalbazar Street, Bikaner Building (3rd Floor),  
Kolkata 700 001  
Phone : Board : (033)22210050-52, 22482066, 22101063,  
91 33 2231 0050/2243 5054  
Fax : 91 33 2230 0336/2242 8470  
Website : www.manaksia.com  
Email : info@manaksia.com

### REGIONAL OFFICES

#### • Eastern Region

##### Office :

Plot No. A 21, Sector - 2A  
Armstrong Avenue, Bidhan Nagar  
Durgapur - 713 212, Dist. Burdwan  
Phone : (0343) 2533400/2380  
Fax : (0343) 2534687  
Email : durgapur@manaksia.com

##### Works :

Plot No. 471, Birsinghapur, P.O. & P.S. : Barjora  
Dist. Bankura, Pin : 722 202  
Phone : (03421) 256034 / 256032 / 257281  
Fax : (03421) 257280

##### Works :

EPIP, Amingaon, Guwahati-31  
Phone : (0361) 2680788/856 • Fax : (0361) 2682857

#### • Western Region

##### Office :

24, Damji Shamji Industrial Complex  
Mahakali Caves Road, Andheri (East)  
Mumbai-400 093  
Phone : (022) 26873634 / 3529 / 5692 / 0652  
Fax : (022) 56920653 • Email : mumbai@manaksia.com

##### Office & Works :

Plot No. 16, New Industrial Area - II  
Mandideep - 1462 046, Dist. Raipur, Bhopal (M.P.)  
Phone : (07480) 232285 / 233176 / 232355 / 233707  
Fax : (07480) 233279 • Email : bhopal@manaksia.com

##### Office :

Plot No. 420, Ward No. 2-B, Adipur - 370 205, Kutch, Gujarat  
Phone : (02836) 309885 • Telefax (02836) 261685, 268709, 249138/39

#### • Northern Region

##### Office :

W-113, Flat No. S3-S4, 2nd Floor,  
Greater Kailash II, New Delhi - 110 048  
Phone : (011) 51435078/5506  
Fax : (011) 51435079 • Email : delhi@manaksia.com

##### Warehouse :

Railway Crossing, Sector - 25, Ballabgarh, Sohna Road  
Faridabad - 121 004, Hariyana • Phone : (0129) 4066580

#### • Southern Region

##### Office :

No. 38, 17th Cross, Malleshwaram, Bangalore - 560 055  
Phone : (080) 23347433 / 23314445  
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##### Office :

14, Justice Jumbhu Lingam Road Flat No. B-3, Jay Jay Terrace  
Maylapore, Chennai - 600 004  
Phone : (044) 28475287 / 28475265  
Fax : (044) 28472114 • Email : chennai@manaksia.com

##### Office :

38, Sundar Nagar, Hyderabad - 500 038  
Phone : (040) 23700732 / 3451 / 23714327  
Fax : (040) 23702584 • Email : hyderabad@manaksia.com

##### Works :

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Industrial Area, Bollaram, Dist. Medak - 502320, A.P.  
Phone : (08458) 279484/453 • Fax : (08458) 279426

#### Overseas Unit

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