



MANGALAM ALLOYS LTD.

Welcome to the world of  
**Stainless Steel**



## Vision



**Uttam Chand Mehta**  
(Chairman)

Strong, dynamic and telescopic leadership under the head of Mangalam Alloys Limited (MAL), Mr. Uttam Chand Mehta, has been the lynch pin of the group companies in its journey through growth and success. Mr. Uttam Mehta, B.E. (Honours) in Chemical Engineering from Birla Institute of Technology and Science, Pilani, brings to the organization a wealthy experience of 40 years in the field of stainless steel industry. He is the ideator behind the concept of grades in the stainless steel melting industry having initialized the concept 40 years ago. His excellent leadership qualities, expertise in motivating his staff and dedication towards work act as a catalyst in delivering the best to the customers around the world. Besides, Mr. Uttam Chand Mehta has received one of the nation's most prestigious awards; the 'Golden Peacock Award'; for his efforts in developing the Naroda Enviro Projects Ltd. Moreover, he has been the director of Naroda Enviro Projects Limited and the founder chairman of Naroda Industrial Co Operative Bank Ltd. NIA Charitable Trust Hospital - Chairman from last 17 years.



## Mission

**Tushar U. Mehta**  
(Managing Director)

Mr. Tushar Mehta, a B.E. in Mechanical Engineering, the Managing Director of MAL, is also the son of Mr Uttam Mehta. Being the face of MAL, Mr. Tushar Mehta, with his strong technical knowledge, leadership qualities and marketing skills leads the Quality, Research & Development, Marketing, Purchase and Imports & Exports departments of the company. With his diligence, the company has established a strong global presence and has been able to double its turnover from INR 500 million to INR 2000 million within 7 years of his amalgamation.

# UCM Group of Companies



For more than 3 decades, UCM Group has demonstrated an unwavering commitment to performance along with integrity. In the span of years, they have also expanded into new businesses and new regions building a colossal record of sustained growth. At the same time the people at UCM group enjoy nationwide reputation for being an innovative and quality driven group of companies. With workforce numbering to nearly 1500, the employees are the highest priority to the organization. Combining hard work with installed capacity of 75,000 TPA the group has been able to reach a turnover of INR 5000 million. Having been a quality driven organization, the company believes in maintaining the right environment for their employees resulting in high quality products.

The prime factor for business excellence and success the company's working policy is its core value of innovation, intelligence, inspiration and integrity.

# About the Company



Mangalam Alloys Ltd. (MAL) was established in 1988 and subsequently registered as a Public Company in 1995. MAL is a stainless steel melting unit covering 40,000 sq. meters land with an installed capacity of 40,000 TPA. MAL., with a turnover of INR 2500 million, has more than 700 employees and is one of the leading companies in the steel manufacturing industry.

Having situated in Ahmedabad, Gujarat, the fastest growing city of India and the third in the world, the location of the company is one of the primary factors of its growth. With India adding 6.9% to the Gross Domestic Product (GDP) and the Government of India establishing a multi-modal high axle load, the Dedicated Freight Corridor (DFC) between Delhi and Mumbai spread across 1483 kms the company's vision is to create a strong economic base in this band with globally competitive environment and a state-of-the-art infrastructure. Therefore boosting local commerce, enhancing foreign investment and real estate investments and attain sustainable developments.

# Welcome to the world of Stainless Steel





# Product Line & Other Technical Details



## **MANGALAM ALLOYS Ltd.**

| S. S. & Alloys Steel Ingots | Billets | Flats Bars | Forged Round Bars  
| Black Round Bars | Bright Bars | Fasteners | Hexagonal Bars  
| Square Bars | Angle Bars

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## **UNISON METALS Ltd.**

| Stainless Steel Sheets | Blanks | Circles | Utensils

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## **UNISON FORGINGS Ltd.**

| Plain Shaft | Stepped Shafts | Blocks | Gear Blanks  
| Crane Hooks | Die Blocks | Customized Forging

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## **MANGALAM STEEL AND ALLOYS Ltd. (Vietnam)**

Stainless Steel manufacturing facility.

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## **AL-SEEB ENGINEERING COMPANY (Kuwait)**

| Sandwich Panel | Fabrication | Laying of Pipeline | Construction

# Production Capacity

- | Melting : 50,000 TPA
- | Rolling : 1,00,000 TPA
- | Heat Treatment : 18,000 TPA
- | Bright Bars : 20,000 TPA
- | Fasteners : 1,000 TPA





### Steel Melting Shop

- | Electric induction furnace
- | Argon Oxygen Decarburization convertor
- | Ingot casting through bottom pouring method up to 6mt
- | Billet/ Bloom Continuous twin stand caster
- | Cored wire injector
- | Ingot/ Billet controlled cooling facility
- | Ingot/ Billet grinding

### Heat-treatment Facilities

- | Soft annealing
- | Normalizing
- | Solution annealing
- | Oil quenching
- | Tempering
- | Spheroidizing

### Rolling Mill Division

- | 20" mill: semi automatic cross-country mill
- | Re- heating furnace: Natural gas operated PLC controlled with on line O2 Gas analyzer
- | 16" mill: semi automatic cross-country mill
- | Re-heating furnace: Natural gas operated PLC controlled with on line O2 Gas analyzer
- | 12" mill: semi automatic cross-country mill

# Manufacturing Facilities



## Bar Straightening Facility

- | Round bar straightening machine
- | Hexagonal & square bar straightening machine
- | Angle & Flat bar straightening machine

## Bright Bar Division

- | Peeling machine
- | Centre less grinding machine
- | Two roll straightening
- | Bar polishing machine
- | Belt polishing machine
- | Chamfering machine
- | Schumag combined wire drawing machine
- | Draw bench for bars
- | Shot blasting facility
- | Pickling

## Fastener Division

- | Horizontal screw hammer (350mt) - 2 nos.
- | Horizontal screw hammer (250mt) – 1 no.
- | Induction heating facility
- | CNC machine
- | Threading machine
- | Electro polishing/buffed polishing

## Open Die Forging Division

- | 6 MT steam hammer with manipulator
- | Controlled cooling facility
- | Heat-treatment furnace
- | Full fledged machine shop



## Supply Condition

As cast/as rolled, annealed.

# Product Range



## Forging Ingots

Size Range

| 9.0" x 10.5" | 10.0" x 12.0" | 11.0" x 13.0" | 12.0" x 14.0"  
| 14.0" x 16.0" | 18.0" x 21.0" | 20.0" x 22.0" | 21.0" x 23.0"

# Product Range



## RCS

Size Range : 45x45, 55x55,  
63x63, 75x75,  
80x80, 90x90,  
85x85, 95x95,  
100x100 mm

Length : 3 to 7.5 meters

## Billets

Size Range  
100 x 100mm  
120 x 120mm  
140 x 140mm  
160 x 160mm  
200 x 200mm





## Product Range

### Supply Condition

**Heat Treatment:**

Annealed, Solution Annealed, Oil & Water Quenched, Tempering & Normalizing

**Bars End Finish:**

Chamfered ends, Plain ends without Burrs or Sharp Edges

**Specifications:**

As per EN, DIN, JIS, ASTM, BS, ASME, AISI, etc.

Material Identifications Testing through mobile handheld spectrometers for 100% bars.

Ultrasonic testing on 100% bars.



### Black Round Bars

Size Range : 14 to 135 mm (9/16" to 5 5/16")

Length : 3 to 7.5 meters

# Product Range



## Bright Round Bars

Size Range : 3 mm to 130 mm  
(1/8" to 5")  
Length : 3 to 7.5 meters  
Straightness : 0.50 mm/meter max.  
Size Tol : h8, h9, h11, h12,  
k12, k13

## Bright Forged Round Bars

Size Range : 135 to 400 mm  
(5 5/16" to 15 3/4")  
Length : 2.5 to 6 meters  
Tolerance : k12, k13





## Product Range

### Supply Condition

Heat Treatment:  
Annealed, Solution Annealed, Oil, Water Quenched,  
Tempered, Normalizing

Bars End Finish:  
Plain ends without Burrs or Sharp Edges

Specifications:  
As per EN, DIN, JIS, ASTM, BS, ASME, AISI, etc.

Material Identifications Testing through mobile handheld spectrometers for 100% bars.

Ultrasonic testing on 100% bars.



### Hexagonal/Square Bars

Size Range : 12mm to 60mm (½" to 2" in)

Tolerance : h11, k12, k13

Length : 3 to 6 meters

# Product Range



## Angle Bars

Size Range : 20x20x3 to  
100x100x12 (mm)  
: 3/4 x 3/4 x 1/8 to  
4 x 4 x 1/2 (Inch)  
Length : 3 to 6 meters

## Flat Bars

Size Range : 20x5 to  
100x12 (mm)  
: 3/4 x 3/16 to  
4 x 1/2 (Inch)  
Length : 3 to 6 meters





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# Fasteners



**Grades** : Stainless Steel/Duplex/Super Duplex  
**Size Range** : M16 to M90 (1/2" to 4")  
**Standards** : IS | BS | DIN | ASTM | JIS

## Hex Screw / Hex Bolt:

**Standard**: DIN 933, DIN 931 | ISO 4017 | ISO 4014  
**Size in length** : 60 MM - 1000 MM (3/4" to 4")  
**Dia** : M20 to M30, 3/4" to 3.1/2"

## Hex Nut / Heavy Hex Nut:

**Standard**: DIN 934 | ANSI 18.2 | IS 1364  
**Size in length** : M30 to M76 (1.1/8" to 4")

## Stud/Threaded (Half/Full Thread, Double Ended)

**Standard**: DIN 938, DIN 939, DIN 975, DIN 976, DIN 2509  
**Thread type** : MM, BSW, BSF, UN, UNC, UNF & FINE PITCH  
**Size in length** : 25 MM - 3000 MM  
**Dia** : M16 (5/8") to M90 (4")

## Allen CAP:

**Standard**: DIN 912  
**Size in length** : 60 MM - 1000 MM

## Allen CSK:

**Standard**: DIN 7991  
**Size in length** : 60MM - 1000 MM

## Square Head Bolts / Screw:

**Size in length** : 60MM - 1000 MM

## Special Fasteners

- | T - Headed bolts (As per customer specification)
- | Anchor bolt assembly for marine fender
- | Resin anchor for marine fender
- | Foundation bolts of stainless steel for marine construction
- | Hollow sleeve (As per customer specification)
- | U hooks for marine fenders & marine construction
- | Special machine components as per drawing



# Forgings



**General Engineering Grades** : C20, C35/35C8, C40/EN-8, EN-9, EN-42, C45/Ck45, AISI 1050, 1030, EN19/42CrM04, EN24, 34CrNiMo6, 30CrNiMo8, 15CDV6, 25CrMo4, SA-105, S355 J2G3.

**Heat Resisting Grades** : 13CrMo44, 21CrMoV5.11, 21CrMoV57, 28CrNiMoV59

**Case Carburizing Grades** : 18CrNiMo7-6, SAE-8620, EN-353, EN-354

## **Stainless Steel (SS)**

**Austenitic** : AISI 303, AISI 304/304L, AISI 310, AISI 316/316L, AISI 321, AISI 347, AISI 316T

**Martensitic** : AISI 431, AISI 410, AISI 420, AISI 416

**F-series** : F1, F5, F9, F11, F22 etc.

**Duplex Steel** : UNS 32205/F-51

**Hot Die steel** : H-10, H-11, H-12, H-13

**Age Hardenable Steel** : 17-4PH, 15-5PH



# Grades

Mangalam Alloys have extensive range of grades in all categories of stainless steel. We have strong base in various hot die, tool steels & high alloy steels.

Austenitic Grade		
DIN	BS	AISI
1.4310	301S21	301
1.4307	304S11	304L
1.4306	-	304L
1.4311	-	304LN
1.4301	304S31	304
1.4305	303S31	303
1.4319	-	302
1.4541	321S31	321
1.4404	316S11	316L
1.4401	316S31	316
1.4571	320S31	316Ti
1.4429	-	316LN
1.4438	-	317L
1.4449	317S16	317
1.4436	316S33	316
1.4550	347S31	347
1.4546	347S20	347H
1.4845	310S31	310S
-	-	201
-	-	202
1.3964	-	Nitronic 50 (XM-19)
-	-	Nitronic 60
Duplex Stainless Steel		
1.4460	-	329
1.4462	318S13	F51/F60
Ferritic Grade		
1.4016	430S17	430
1.4105	-	430F
-	-	446
1.4109	-	
1.4512	-	409

Martensitic Grade		
DIN	BS	AISI
1.4006	410S21	403
1.4011	-	410
1.4005	416S21	416
1.4021	420S95	420
1.4028	-	420B
1.4031	431S29	420C
1.4036	-	-
-	-	422
1.4057	-	431
-	-	440A
1.4112	-	440B
1.4125	-	440C
1.4313	-	F6NM
Precipitation Hardening Grade		
1.4542	-	17-4PH (630)
1.4545	-	
Tools Steel		
1.2365	-	H10
1.2343	-	H11
1.2605	-	H12
1.2344	-	H13
1.2510	-	O1
1.2714	-	DB6
Alloy Steel		
-	-	F5
-	-	F9
-	-	F11
-	-	F12

# PSQ Bars



We are one of the leading suppliers of **Precision Shaft Quality (PSQ)** bars in India.

PSQ bars in stainless steel industries, indicates Turned, Ground & Polished shafting used in Valve, Bearing and Automobile Industries.

PSQ stainless steel bars require very high degree of straightness and outer diameter tolerances are highly precise due to the nature of the bars.

We could achieve the stringent Straightness & Diametric Tolerance with our modern machines after following stringent Peeling, Polishing & Grinding Process.

**We offer Following Size Range :**

14 mm – 75 mm ( 5/8" – 3")

**We offer as per following Supply Conditions :**

**Length :** 3 to 6 meter

**Size Tolerance :** h8 , h9

**Straightness Tolerance :** 0.50 mm per meter max.

**Heat-treatment :** Soft annealing, Solution annealing, Quenched & Tempered.

# Quality Assurance



# Testing Facility:

- | Optical Emission spectrometer
- | Mobile handheld spectrometer
- | Chemical testing
- | Universal tensile testing machine for the determination of mechanical properties
- | Brinell hardness testing machine
- | Rockwell hardness testing machine
- | Mobile hardness testing machine
- | Ultrasonic testing machine
- | Radio activity testing
- | DP testing arrangement
- | Optical microscope
- | Surface roughness testing
- | Optical pyrometer for on line temperature measurement

## Applications



Oil & Chemical Industries



Valve Industries



Aircraft & Aerospace Industries



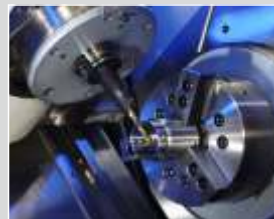
Automotive Industries



Pharmaceutical Industries



Petrochemical Industries



Machining/Engineering Industries



Marine Industries



Ordinance & Ship Building Industries



Pulp & Paper Industries



Dairy Industries

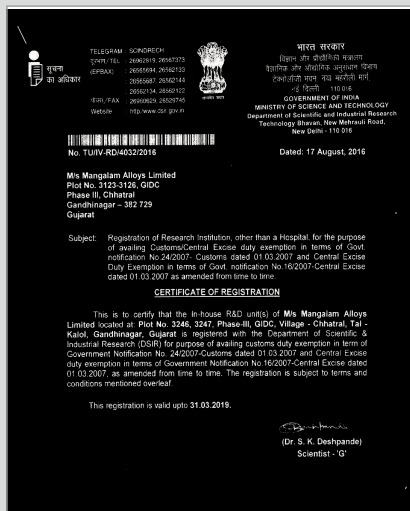


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# In-House R & D



Mangalam Alloys is keenly engaged in Research & Development for several Years. It has done pioneering research in recycling of Hazardous waste to extract harmful elements while giving value addition to waste.

It has worked for energy conservation, In-House Machine Development, Non-Conventional Energy Resources.

Through infinite R&D Efforts Mangalam has been able to boost its global presence through Quality Product such as Brightbars and Special Fasteners increasing the Export Value in last few years.

We have a pool of talents tied in a chord and their efforts result in benefiting the industry.

In addition to our engineering efforts , we believe to Protect environment by Development of Waste Processing Technologies which in turn makes it more Eco-Friendly Industry.

Our In-house R&D center has been awarded recognition by Department of Scientific and Industrial Research (DSIR) .

This is one of Prestigious and Unique Distinction, first of its kind in Stainless steel Integrated Process Industry.

In the inspirational Light of Shree Uttam Mehta, who lead the R&D center of Mangalam Alloys have vision of Zero Waste, Zero Discharge, Optimized Energy Use and Continuous Cost Reduction through Kaizen approach.

# CSR Activities

## **MAL:**

Concept Of Zero Waste :To save our valuable Mother Earth, MAL is working towards Zero Waste and trying to set an Example of Most Eco-Friendly Steel production.

All the waste generated while processing of Steel is been treated to make it Non-Hazardous or To get some value products out of it.

## **Labour Colony:**

More than 400 labours of MAL are sheltered at Labour colony of MAL with their facilities required to fulfill their daily needs.

## **Canteen:**

MAL has a fully equipped canteen which currently serves 800 employees .

## **Health Checkup and Clinic:**

MAL has 24x7 Health Checkup and Clinic facility with a full time doctor to serve its employees the very moment they need it.

## **NEPL:**

MAL Honorable chairman Shree Uttam Chand Mehta was Founder Director of NEPL.

NEPL has successfully achieved following National and International acclamation :

- Indo German Greentech Environment Excellence Award from 2001 to 2005
- Golden Peacock Environmental Management Award for clean Technology – 2005
- Rajiv Gandhi Shiromani Award – 2009
- International Gold Award by Business Initiative Directions (BID) at New York – 2009
- Indira Gandhi Sadbhavana Award – 2010
- Award for Developing “Green Belt” in Gujarat at the August hands of Hon'ble Chief Minister Shri Narendra Modi – 2010
- Platinum Technology Award for Quality and Best Trade Name from Otherways, Switzerland – 2010
- International Diamond Category Award by Business Initiative Directions (BID) at Geneva – 2010
- 1st Category Award from Gujarat Horticulture Association for Consecutive 6 Years till 2012
- Green Idol Award – 2012 given by leading Daily New paper Divyabhaskar

## **PERSONAL:**

MAL Honorable chairman Shree Uttam C Mehta is Involved in many Personal Social Activities:

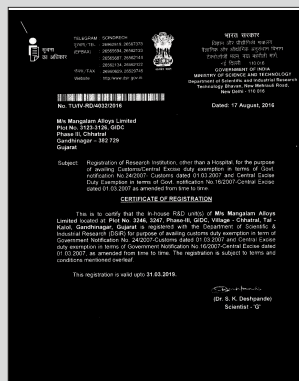
- He is working as chairman at LAPKAMAN, JSS TRUST.
- He is working as chairman at CHANDANMAL MEHTA CHARITABLE TRUST.
- He is working as President at JSS AHMEDABAD GROUP.
- He is working as chairman at NIA CHARITABLE HOSPITAL.
- He was founder chairman of NIA Co-operative Bank.

# Our Exports



# Certifications

- | ISO 9001:2008 – TUV SUD
- | PED (Pressure Equipment Directive - 97/23/EC) : TUV SUD
- | ISO 14001:2005:QEC – UKAS Management System
- | BS OHSAS 18001:2007:QUE – UKAS Management System
- | Government Recognised Export House : Government of India
- | Recognition of In-house R & D : Government of India
- | Approved by defence of India





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## **MANGALAM ALLOYS LTD.**

### **Factory**

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