



Tec Aero Devices

...Making it Possible

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Mobile: 95425 77711 e-mail: ceo@tecaero.in



Established Aerospace Fastener Company in INDIA with Key Customers from Defence Services, MoD Establishments, Defence Public Sector Companies.

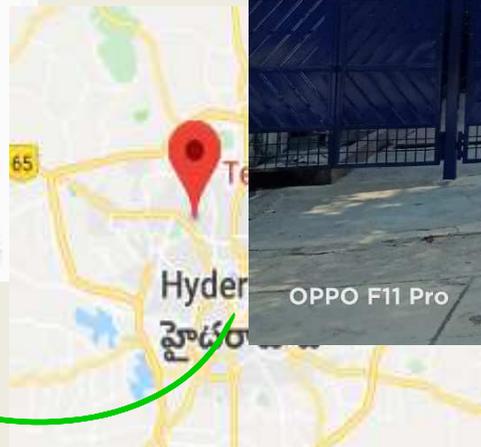
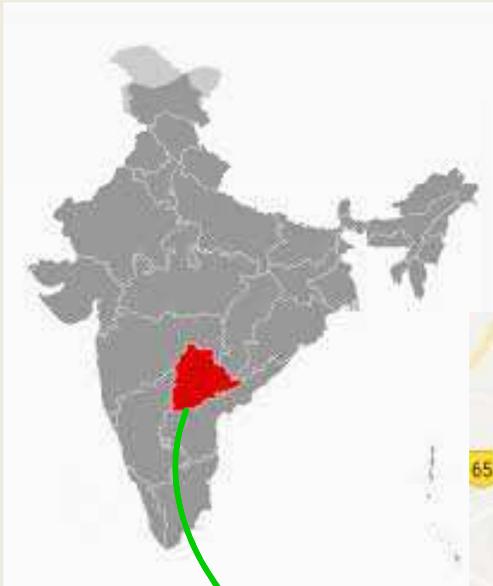


AEROSPACE FASTNERS



FOOT PRINT

- ▶ Located in Hyderabad, India with close proximity to major aerospace, defence organisations.
- ▶ 10 minutes drive IT Hub



Professional Synopsis

- Visionary entrepreneur - about 30 years of experience in Aerospace and Engineering industry.
- Founded Tec Aero Devices in 2013, with a vision to support Aerospace and Defence industry with quality and speciality Aerospace fasteners.
- Business acumen with flair for product development and process automation and accomplished significant results during the services, including successful management of INR 200 Crore business unit.
- Certified lean manufacturing professional



Mr. Sivarama Prasad
B Tech, M. Tech-IE
Chief Executive officer



BUSSINESS OVERVIEW

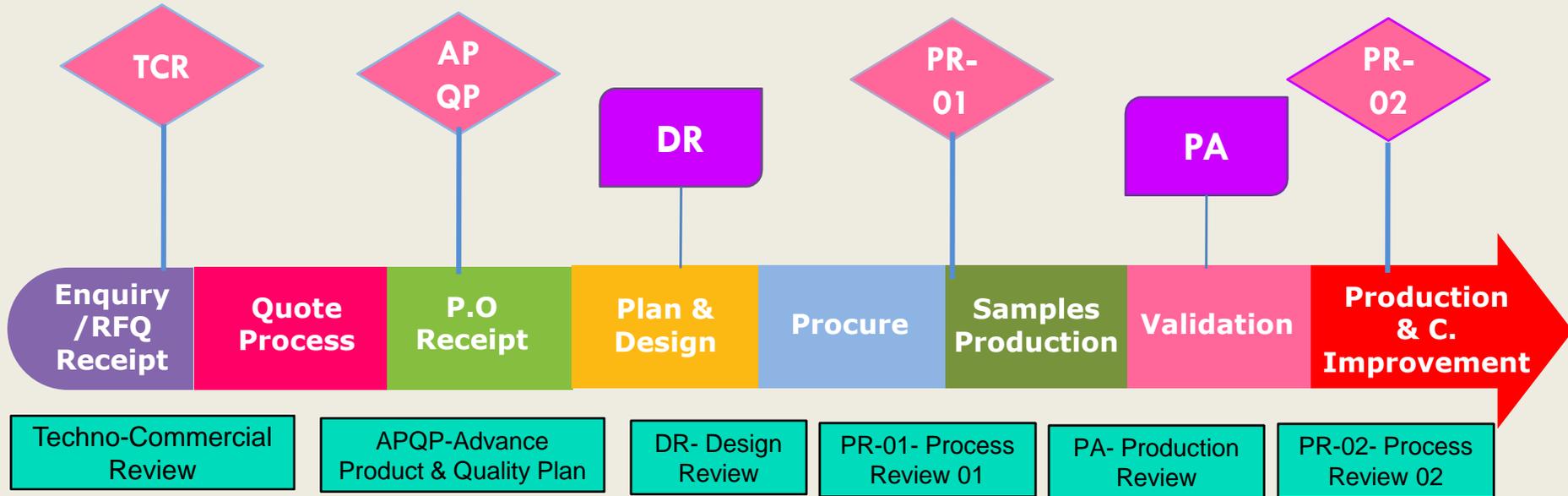
AEROSPACE FASTENERS

- TEC AERO a family owned Company is a leading manufacturer of Russian and Western Aerospace Fasteners.
- We are a full-fledged manufacturing facility completely equipped in-house ranging from wire draw to special process and quality testing for product qualification.
- Our primary customers are Defense Services, MoD establishments (DRDO, Ordnance Factories..), DPSUs and Space Organizations' (HAL, ISRO, BDL, Brahmos ...) and private OEMs / integrators.
- Marketing is through Direct channel. The products are of Aerospace standards complying to the quality standards specified by esteemed Customers.
- The manufacturing facility specializes in Cold heading, thread rolling, centerless grinding, special processes (heat treatment and coatings) and well established quality testing laboratory with hi-tech instruments and testers. The products range from M1.4 to M16 of 200 mm length.
- Tec Aero was established in 2013 with first supplier being HAL- Aircraft Manufacturer, Since then, in 2017 the Company was awarded with the MoD Certification (CEMILAC) for undertaking Design and Development of fasteners for Military aircraft and helicopters etc.
- The Company has produced and supplied about 6500 Aerospace fastener parts.
- The Company is accredited with National / International certifications namely AS 9100D-2016, HAL certifications, DGQA & CEMILAC Certifications.

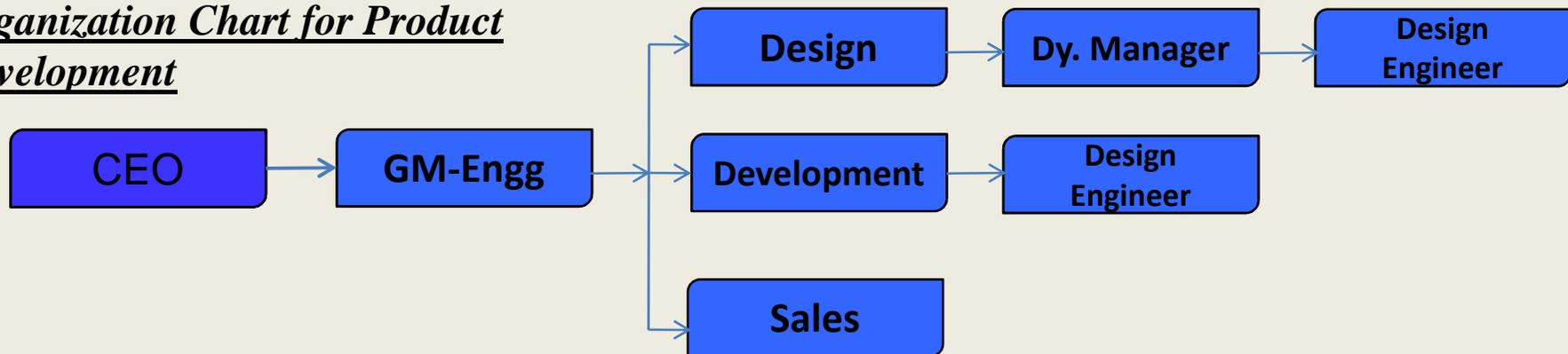


Product Development Process Flow

FLOW:



Organization Chart for Product Development



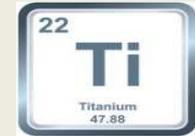


TECAERO reserves the material stocks of regular product materials of Russian Gost standard and western grade materials- to serve the customer quickly





RAW MATERIALS STOCK LIST



Steels

- St-10
- St-15
- St-20
- St-25
- St-45
- St-A12
- 07KH16N6-SH
- 09KH16M4B
- 10KH11N23T3MR
- 12KH13
- 12KH18N10T
- 12KH17G9AN4
- 13KH12N2V2MF
- 14KH17N2
- 16KHSN
- 20KH13
- 30KH13

Steels

- 30KHGSA
- 30KGSN2A-VD
- 38KHA
- 40KH13
- 60C2A
- 65G
- 95KH18

Brass Alloys

- LS59-1
- LS59-1 Antimagnetic
- L63
- BRAZMTS
- L163
- M1
- M2 / M3

Special Steel

- A286 per AMS5731
- 35NCD16
- 15CDV6
- 30CR13
- MDN250
- BS S527
- 15-5PH

Aluminum Alloys

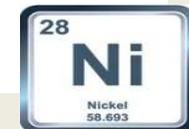
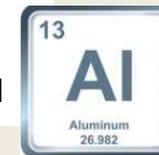
- B65/VB95T1/ADIM
- AMG5P/AMG6
- AK4/AK6/AMTS
- D1P/D16P/D16AM
- D1T/D16T/D16AT
- D18/D18P
- Alloy-2/Alloy-3
- Al. 2024/5056/6061

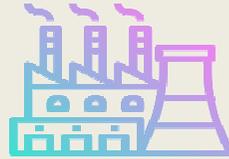
Titanium Alloys

- VT3-1
- VT-16
- Ti.44.5Cb
- Ti.6Al4V
- Titanium Grade 2
- Titanium Grade 5

Nickel Alloys

- XH78T
- XH73MBTU
- Inconel 718
- AMS 5663
- XH60BT





Upsetting machines:
Quantity: 6 no
Range: $\varnothing 1.4 \sim 16$ mm

CNC Turning
Wire drawing
Centre less grinding

Surface Grinding
Die polishing
Lathe

Thread roll machines-2 no
Slotting
Trimming



Other machines:
single spindle automats (5), Drilling & Tapping machines(10) & special application machines (10).
Backed with skilled workforce and qualified team to produce quality products



BOLT

BOLTS:

- Hexagon head
- C'Sink head
- Cylindrical head
- Semi-Circle head
- Square head

MATERIALS:

- Steels
- SS, Special steels,
- Alloy steels,
- Aluminum alloys,
- Titanium alloys,

STANDARDS:

- OST1, GOST, MS
- IS, ISO, DIN, NAS



HEX FLANGE BOLT

HEX FLANGE BOLTS:

- Hex Lag Indents head
- Hex Washer Serrated

MATERIALS:

- Steels
- Special steels
- A286 as per AMS 5731

STANDARDS:

- DIN,
- MS specs
- ISO
- IS



SCREW

SCREWS:

- Hexagon head
- C'Sink head
- Cylindrical head
- Semi-Circle head
- Square head

MATERIALS:

- Steels
- SS, Special steels,
- Alloy steels,
- Aluminum alloys,
- Titanium alloys,

STANDARDS:

- OST1, GOST, MS
- IS, ISO, DIN, NAS



BIHEX BOLT

BI-HEX BOLT:

- 12 Point Bolt with flange
- Bihex Bolt

MATERIALS:

- Special Steels
- A286,
- Nickel Alloys

STANDARDS:

- MS
- OST1



NUT

HEXAGON NUT

- Hexagon head
- 2 Cross holes nut
- 3 cross holes nut
- Hexa with step

MATERIALS:

- St-10, 20, 45, A12
- 30KHGSA
- 10KH11N23T3MR
- 13KH12T2V2MF
- 14KH17N2

STANDARDS:

- OST1, GOST, MS
- IS, ISO, DIN, NAS



HEX FLANGE NUT

HEX FLANGE NUT:

- Hex Flange nut
- Hex Washer
- Serrated

MATERIALS:

- Steels
- Special steels
- A286 as per AMS 5731
- 14KH17N2

STANDARDS:

- DIN,
- MS specs
- ISO
- IS



BIHEX NUT

BIHEX NUT:

- 12 Point Nut
- Bihex Nut serrated

MATERIALS:

- Steels
- SS, Special steels,
- Alloy steels,
- Titanium alloys,

STANDARDS:

- OST1, GOST, MS
- IS, ISO, DIN, NAS



CASTLE NUT

CASTLE NUT:

- Castle nuts with 6 slots
- castle nut, 4 slots
- Castle nut with flange

MATERIALS:

- St-45, A12
- 30KHGSA
- 10KH11N23T3MR
- 13KH12N2V2MF
- 14KH17N2

STANDARDS:

- MS, ISO
- OST1, IS, DIN



DOUBLE LUG ANCHOR NUT

MATERIALS:

- 16KHSN
- AISI 4135

STANDARDS:

- OST1, MS, & NAS



ANGULAR SELF LOCKING NUT

MATERIALS:

- 16KHSN

STANDARDS:

- OST1, MS, & NAS



SINGLE LUG ANCHOR NUT:

MATERIALS:

- 16KHSN

STANDARDS:

- OST1, MS & NAS



STUDS

- Full thread
- Double End stud

MATERIALS:

- Special steels

STANDARDS:

- OST1, MS, & NAS



SQUARE NUT:

- Sq. nut.
- Square nut with one side radius

MATERIALS:

- SS & Steel

STANDARDS:

- OST1, MS & NAS



ROUND SLOTTED NUT:

- Nut with 6 slots

MATERIALS:

- MS & SS

STANDARDS:

- ISO, IS, GOST.



SOLID RIVETS:

- Cylindrical head
- Semi circle head
- 90° CSK
- 120° CSK

MATERIALS:

- Steels
- Aluminum & Alloys
- Stainless steel
- Titanium
- Brass
- Copper

STANDARDS:

- OST1, GOST, MS
- IS, ISO, DIN, NAS



HALLOW RIVETS:

- Flat head
- 90° CSK head
- 120° CSK head

MATERIALS:

- Steels
- Aluminum & Alloys
- Stainless steel
- Titanium
- Brass
- Copper

STANDARDS:

- OST1, GOST, IS
- MS, NAS
- ISO
- IS



GRUB SCREWS

- Slotted Grub screw
- Hex Socket Grub screw.

MATERIALS:

- Steels
- Stainless steel
- Alloy Steels
- Special steels

STANDARDS:

- OST1, GOST,
- MS, NAS
- DIN,
- IS, ISO



RIV-NUTS:

- Hexagon head
- 90° CSK head with Cross slot punch.
- 120° CSK head with Cross slot punch

MATERIALS:

- 16KHSN
- 30KHGSA

STANDARDS:

- OST1,
- GOST,
- NAS,
- MS



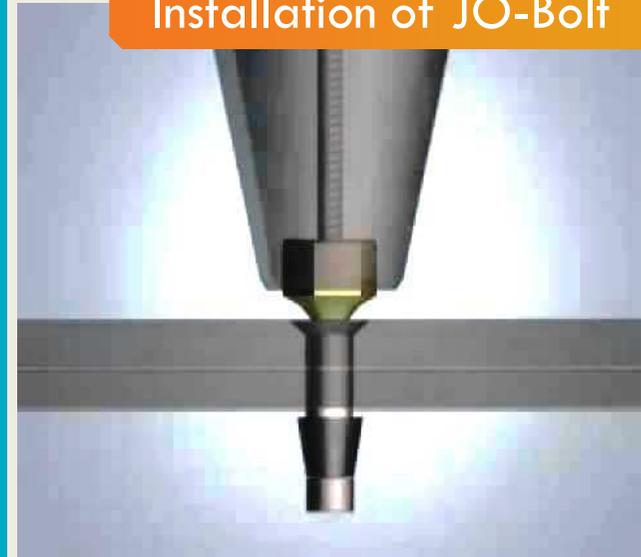
JO-Bolt



JO-BOLT:

The JO-Bolt is an advanced blind fasteners used in “Structural Aircraft components”. Where high degree of joint integrity is required, unique design characteristics provide performance similar to conventional fastening.

Installation of JO-Bolt



Types:-JO-Bolt



Types of JO-Bolt

- High shear strength Jo-Bolt with Hexahedral head
- High shear strength Jo-Bolt with 90° CSK with Cross slot punch
- High shear strength Jo-Bolt with 120° CSK with cross slot punch

MATERIALS:

- 30KHGSA, 16KHSN, 12KH18N10T

SIZES: M3.5 & M4

STANDARDS:

- OST1, MS, NAS.



COVER- Pipe Connection

MATERIALS:

- 13KH12N2V2MF

STANDARDS:

- _GOST Std.

T-Head Bolt



T-HEAD WITH SQUARE NECK BOLT

MATERIALS:

- 13KH12N2V2MF-SH

STANDARDS:

- Made to Customer Std.

Band End Connecting Bolt



BAND END CONNECTING BOLT

MATERIALS:

- _MDN 250

STANDARDS:

- VSSC STD.



Circlips

CIRCLIPS:

- External & Internal Circlip
- E-Type Circlip
- Ring-Circlip

MATERIALS:

- _60C2A, 10KH., 70C6

STANDARDS:

- OST1, GOST.



Product Ranges

Strength Class-Bolts

As per ISO 898-1

- 12.9 grade,
- 10.9 grade,
- 9.8 grade,
- 8.8 grade
- 6.8 grade
- 5.8 grade,
- 5.6 grade
- 4.8 grade,
- 4.6 grade.

Rivets Range

Body dia :
Ø1 mm to Ø10 mm.
Body Length :
3 mm to 60 mm

Strength Class-Nuts

As per ISO 898-2

- 12 grade,
- 10 grade,
- 9 grade,
- 8 grade,
- 6 grade,
- 5 grade,
- 4 grade.

Strength Class-Grub Screw

As per ISO 898-5

- 14H
- 22H
- 33H
- 45H

Metric Range

BOLTS & SCREWS

M1.6 to M12

NUTS:

M1.6 to M42

GRUB Screws:

M1.6 to M8

MR & MJ Threads

BA Threads

As per BS57 Std.

- 6BA
- 8BA
- 10BA
- 12BA

Washer-Range

M1.6 to M 30

INCHES RANGE

BOLTS, SCREWS & NUTS: UNC SERIES

- 2-56 UNC
- 4-40 UNC
- 6-32 UNC
- 8-32 UNC
- 10-24 UNC

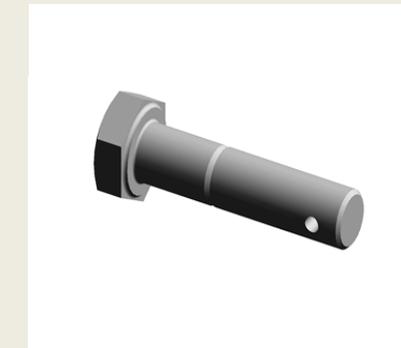
BOLTS, SCREWS & NUTS: UNF SERIES

- 2-64 UNF
- 6-40 UNF
- 8-36UNF
- 10-32 UNF



Aerospace Standard Parts (Fasteners)









Metal wares for Engines



**SPHERICAL
SPHERICAL NIPPLES
GOST 16041-70**



**UNION NUTS GOST
16046-70**



**HEMISPHERICAL
WELD NIPPLES GOST
16042-70**



**PLUGS CONICAL
GOST 16077-70**



**SOLDER FITTINGS
GOST 16044-70**



**WELDED FITTINGS
GOST 16045-70**



**DRIVERS DIRECT
GOST 16049-70**



**UNION NUTS FOR
SPHERICAL NIPPLES**



**ELONGATED
STRAIGHT DRILLS
GOST 16050-70**



**FLANGED BUSHINGS
GOST 16051-70**



**ADAPTERS DIRECT
GOST 16052-70**



**SCREW-DRIVERS
UNDER RUBBER
SEAL GOST 16070-70**

Heat Treatment Facilities



Hardening Process

Tempering Process

Internal Stress Relieving

Low-Tempering Process

Internal Stress Relieving

Ageing Process

Precipitation-Hardening



Other machines:
Tempering furnace small and coating thickness measuring testing equipment
Backed by skilled work force and dedicated lab analyst.

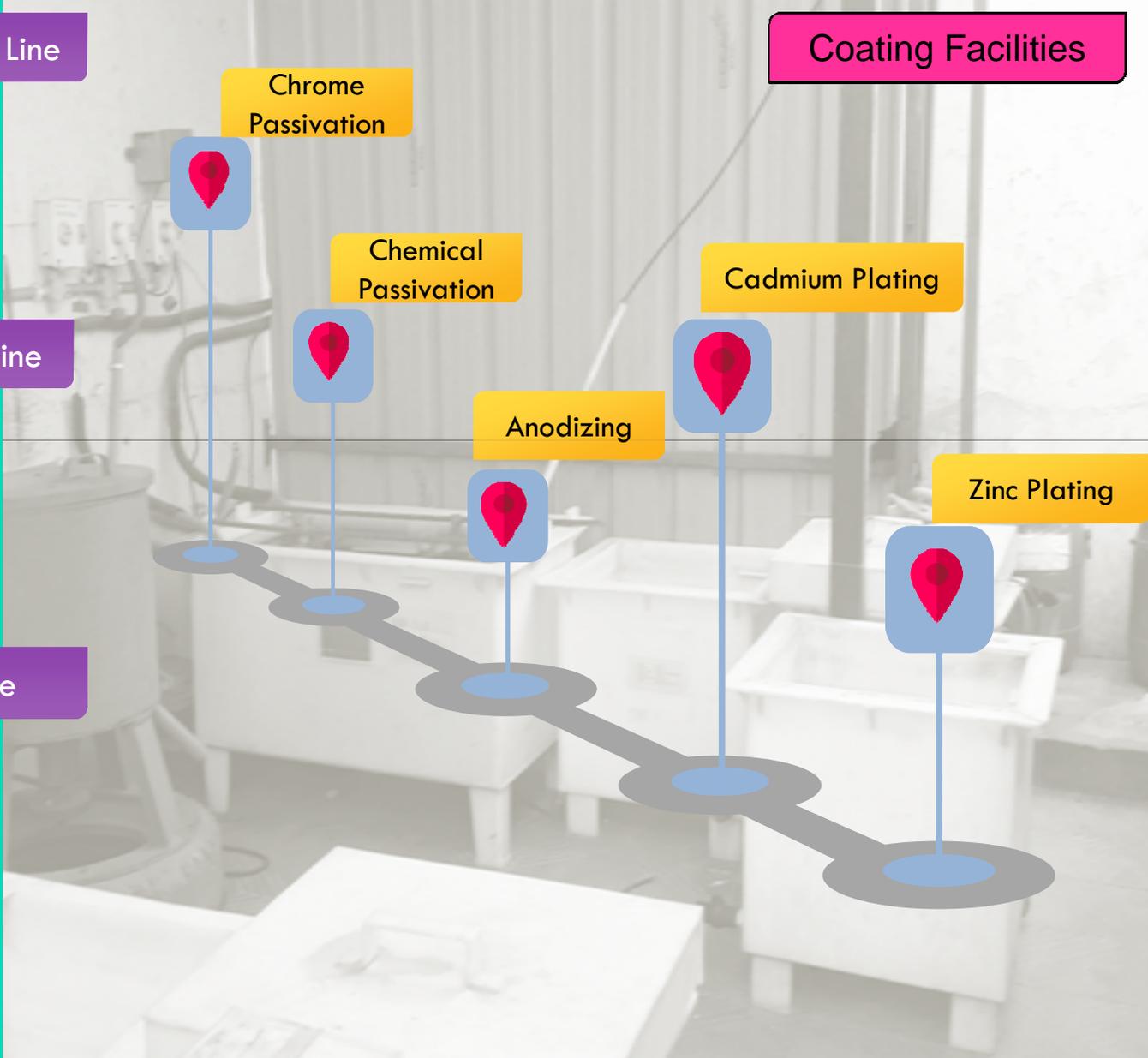


Anodizing Line

Cadmium Line

Zinc Line

Coating Facilities



Chrome Passivation

Chemical Passivation

Anodizing

Cadmium Plating

Zinc Plating



Profile
Projector



Hardness
Tester



Optical
Measurement



Dot pin
marking m/c



Universal Testing
Machine

Other instruments:

Height gauge, general measuring instruments ,thread measuring and surface condition.
Dedicated QA team manage in-process and final quality to comply as per QMS at all times.

List of Customers

HAPPY CUSTOMERS

MISSILES-SECTORS



SPACE-CRAFTS



List of Customers

HAPPY CUSTOMERS



AIRCRAFTS



HAL NASIK:

AMD Div., AOD Div.,
11 BRD & 1 CIMD

HAL KORAPUT:

ENGINE Div. & Overall Div.

HAL KORWA,
HAL LUCKNOW.

HAL BANGALORE:

LCA-TEJAS, AIRCRAFT Div.
AERDC Div, ENGINE Div.

All BRD'S (Base Repair Depot)
25 ED & 29 ED's.

HAL HYDERABAD
HAL KANPUR

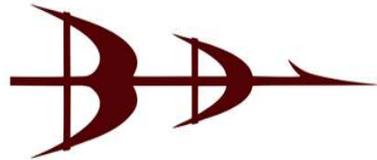


AEROSPACE FASTNERS

List of Customers

HAPPY CUSTOMERS

MANUFACTURING-SECTORS



BHARAT DYNAMICS LTD.
(A Govt. of India Enterprise)



ELECTRONICS CORPORATION OF INDIAN LIMITED
A Govt. Of India (Dept. of Atomic Energy) Enterprise



WALCHANDNAGAR
WALCHANDNAGAR INDUSTRIES LIMITED



AEROSPACE FASTNERS

