



## TITAN AVIATION & AEROSPACE INDIA LIMITED



**AEROSPACE & DEFENCE PARK**  
UNDER  
**MAKE IN INDIA**

Titan Aviation & Aerospace India Ltd (TAAIL) incorporated in the year 2011, with the objective of import substitute for Aerospace & Defense segments in India. As a startup, TAAIL is in possession of key technologies for additive manufacturing to cater to the needs of the industry.

TAAIL in collaboration with Ukrainian companies is in the process of creating industrial hub under Make in India with prominence for Aerospace & Defense segments. TAAIL will introduce 3-D printing technologies to manufacture MIL Grade precision components to aircrafts in India. This facility will cater to both domestic and global markets. The proposed project will be implemented in four phases with focus on Aviation, Aerospace and Defense.

Titan Metals & Minerals Ltd (TMML) another entity owned by TAAIL is specializing in extraction beach sand minerals and further plans to build Titan Sponge Plant with Russian Technology.

The Group began as trading company sourcing of Advanced, Ballistic, Composite & Strategic materials for Indian Defense and later transformed into multi-disciplinary activities.

The company is headed by Giri Kumar as Chairman & CEO and assisted by Dinesh Kumar, Sridhar Rao and Vijay Srikanth as Directors of the board. We have the overseas team from Ukraine lead by Alexander.V. Chechel and Benton Wilcoxon from United States who will over sea the project right from inception to implementation of the project.

**Aviation:** Phase 1 of the project will commence with civil simulators for Airbus, Boeing and Russian Helicopters. Leasing of helicopters for offshore flying for Oil & Gas companies in India and Aviation University for skill development program for in house workforce.

**Aerospace:** Phase 2 of the project will have Aerospace Laboratory, Research & Development Centre, and Design Office for all the production facilities. This cluster will focus on manufacturing of components, engines, wings, and the airframes.

**Aerospace:** Phase 3 of the project includes advanced maintenance centers for Aircrafts with C & D checks. Further manufacturing of helicopters, sub-assembly and assembly of aircrafts to start with and later manufacture aircrafts in India.

**Defense:** Phase 4 of the project is into manufacturing of Drones, Bullet Proof Vests, Bomb Blankets, converting VIP Cars and Flying Machines into Armored Vehicles. Upgradation of battle tanks and aircrafts of India Armed Forces. If need be we can also setup simulators for combat equipment's.

## Our Team



**K.Giri Kumar**  
Chairman & CEO



**Alexander Chechel**



**Benton Wilcoxon**



**Alexander Loss**



**Semykhodskyy**



**C.Dinesh Kumar**



**M.Sridhar Rao**



**K.Vijay Srikanth**



**D.Srinivas**



**Mallesh PP**



**Raj**



# Aerospace FTZ



## Our Collaborators

 <p><b>ANTONOV</b> Aircraft Manufacturing</p>	 <p><b>NextMetals</b></p>
 <p><b>Engine</b> Manufacturing</p>	 <p><b>IPMS</b></p>
 <p><b>Heli</b> Manufacturing</p>	 <p><b>Malyshev Plant</b></p>
 <p><b>FED</b> Component Manufacturing</p>	 <p><b>LSARP</b></p>
 <p><b>YUZHMAH</b> Space- Missile Plant</p>	 <p><b>Skyeton</b></p>
 <p><b>National Aviation</b> University</p>	 <p><b>Welding Institute</b></p>
 <p><b>MARKET-MATS</b> FULL FLIGHT SIMULATORS</p>	 <p><b>UKROBORONPROM</b></p>



# Facilities in Aviation Park



A-320



Boeing-737



Mi-171

Helicopters leasing for offshore companies and Helicopters for Air Ambulance.



An-158



Mi-171



# Products Manufactured and Facilities in Aero Park



An-70



An-74



An-148



An-178



Turbo Jet



Mi-8/17

## 3-D Printed Components & Accessories





# Products Manufactured and Facilities in Defence Park

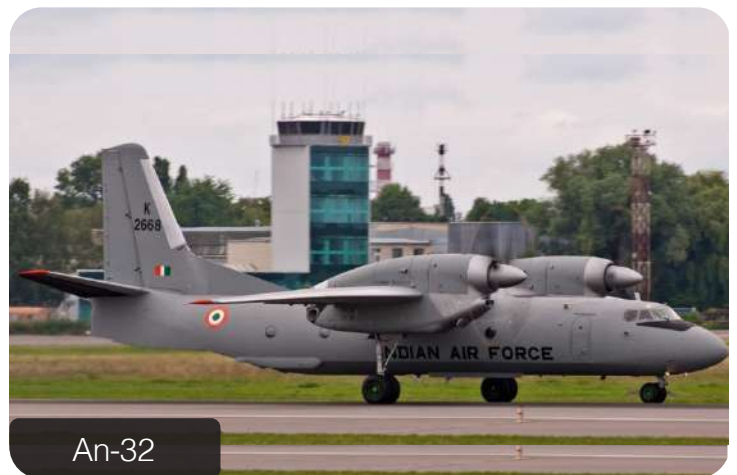
## Bullet Proof Vest & Bomb Blankets



## Titanium Air Ballons & Drones



## Upgradation of Battle Tanks, MIG, Sukhoi & An-32 Aircrafts



# Titan Metals & Minerals Ltd

Titan Metals & Minerals Ltd is a private incorporation based out of India and has a representative office in Ukraine specializing in developing novel advanced materials for Aerospace and Defense.

## **Titan Metals has 4 major key sectors:**

- 1) Technology and new materials for Fusion Additive Manufacturing
- 2) Nano Structured Titanium Special Steels
- 3) Ultra High Strength Scandium Alloys
- 4) Setting up of Titanium Sponge Plant

Titan Metals in collaboration with Next Metals Inc., will be offering these technologies for both domestic and global markets. Titan Metals specializes in Aluminum Scandium Alloys, as our overseas team has vast experience and commercialized the alloy in the early 1990s.

## **The business is currently viewed as 2 operating Units:**

1) Nanostructured Titanium, Special Steels and ceramics group, which all have unique nanomaterials in their composition that significantly improve performance properties. Fusion Additive Manufacturing will further improve the performance and economics of component manufacture for customers for higher temperature applications such as turbine blades, supersonic aircraft and armor.

This unit includes NEXT3D Materials for internal production until it begins to market the new materials directly to manufacturing companies. These materials have been tested which confirmed the superior properties for armor systems and other applications.

2) Aluminum Scandium alloys and composites using fusion Additive Manufacturing to achieve superior performance properties for next generation intake turbine blade, aircraft structures, due to its higher strength and therefore lighter weight to improve energy efficiency.

We can produce highest strength Aluminum Scandium Alloys using the most advanced Severe Deformation (SPD) technology to achieve amazing strength with high elongation aluminum scandium materials using Fusion manufacturing from our unique rods used in the New Fusion AM system. We also produce novel aluminum alloys in spherical micro powders and wire for 3D printing.

Ultra-high strength/high elongation Aluminum Scandium for the largest turbine blades at the intake of jet engines, to full fill prototype agreements to be tested with agreed upon order as certified.

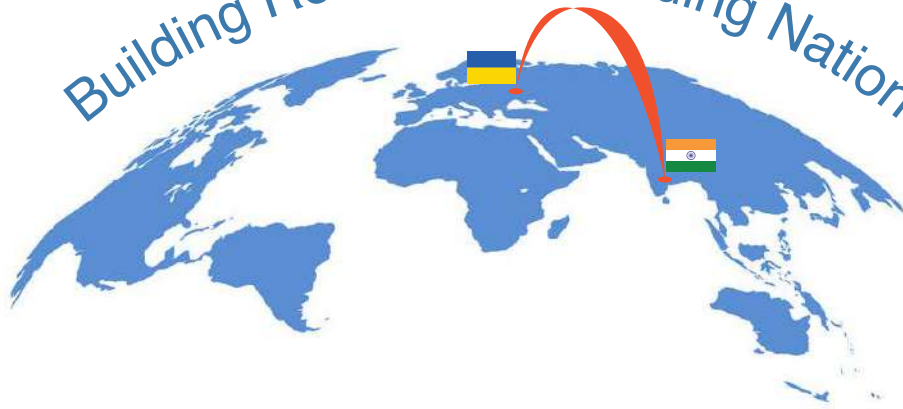
These units will be operated together in order to limit initial development costs, there is a significant synergy in each of these advanced materials development, IP strategy, production and marketing.

Lastly Titan will be set up a physical & mineral separation to produce minerals like Ilmenite, Kainite, Monzonite, Garnet and Zircon partnering with MAST a company based out of Russia. In addition to this Titanium Sponge Plant will be established to cater to Indian Aerospace & Defense.





Building Relation for Building Nation



TITAN AVIATION & AEROSPACE  
INDIA LIMITED.

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