



Systematic Review and Survey on Dominant Influence of Vedas and Ignorance Transpired in Space Science and Aviation

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Abstract—The following paper addresses the age long issue of how Vedic knowledge is being overlooked by the aviation industry and modern science in spite of the proven fact that how much affinity it has with science, quantum theory, astronomy and various other scientific disciplines. The studies that have been conducted till date and those that have not been executed due to absence of sufficient evidence, can all find their potential explanation in the ancient scriptures. This review stresses on the prominence and authenticity that should be given to the asset that we have with us since millenniums. The uttermost primitive sacred inscriptions which define the accuracy for inhabits got its contemporary form between 1200-200 BCE and were introduced to the world by the Aryans. Prehistorians believed that these ancient manuscripts were received directly by worthy intellectuals through divinity and were delivered to the subsequent generations by the mode of Disciplic succession. In other words, to the knowers of Vedanta the quantum theory will not seem to be preposterous. As dominant species we have the strength and intellect to influence the world with ideas and find answers to the most sought-after questions and un-explained facts & theories if we diverge our attention towards the peculiarly treasure which we have in the form of Vedas. Ancient Vedic scriptures not only containers of the knowledge of the self but technology as well. These scriptures have a wide variety of information of how war instruments were created, what kinds of materials were used and operating principles. There has descriptions about different types of war vimanas or planes including highly sophisticated and advanced techniques. The main objective of this precise review is to understand and compare the technology behind the exquisite war vimanas (planes) mentioned in ancient texts with today's modern aircrafts in terms of materials used.

Keywords— ancient vimanas, heat resistance, metallic ores, mercury propulsion systems, vedas, rasagrhandhas, yugas

I. INTRODUCTION

The fine explanations of flying machines in Vedic texts instigate us to think how advanced was the science and technology in the ancient era. But due to the absence of practical evidences, it becomes quite difficult to understand if the descriptions given in the scriptures are real or just a subject of fiction. In one of the primeval scriptures, Srimad Bhagavatam, there is a description of a war aircraft named Saubha Vimana which was built by Maya, one of the most popular architects among the demigods. This aircraft is

classified as being a powerful flying palace constructed of metal which was piloted by King Salva who was willed to destroy all the Vrishnis and demons [1].



Figure 1 Illustration of Saubha Vimana

Our Vedic texts describes other types of flying objects, like in the epic Mahabharata details about a four-wheeled 12 cubic feet aircraft piloted by a demon named Maya; Jalayan, Kaara-kaara-kaara, Trichakra ratha, Vayu ratha, Vidyut ratha, Tripura ratha, a twin engine Agnihotra vimana, and a multi-engine elephant vimana. When we go deep in to the epistemology, it will become more interesting to know that our medieval texts had drafts of techniques to listen the conversations happening in the enemy aircrafts as well as watch it. In addition, there are descriptions of various fascinating features of aircrafts like : Goodh (hidden), Adrishya (invisible), Jaladha rupa, Sankuchita, Vistrita, Akashakara and many more. In a publication named Brihad Vimana Shastra, there are Sanskrit verses accompanied with Hindi translation describing various aircrafts from epics like Ramayana [2]. The pushpaka vimana which was flown by the demon king Ravana and was later dedicated to Lord Rama who defeated him, was one of the most advanced aircraft of its age, it was directed through the power of will and used mercury as fuel which is also called padma rasam [10]. Through rigorous research in Vedas it is stated that the pushpaka vimana was capable of flying at hypersonic speeds that is one thousand times faster than the speed of sound [11]. In Samaranga Sutradhara of King Bhoja have descriptions of various machines and flying machines constructed using a variety of materials including bio wastes[3]. According to this text there are two disciplines of

a Dharu Vimanas: Laghu dharu vimana and Alaghu dharu vimana [4]. There are following types of vimanas mentioned in Vimanika Shastra: Mantrik, Tantrik, and Kritaka Yantrik. And furthermore in Kritaka yantrik there is Shakun vimana, Rukma vimana, Sundara vimana and Tripura vimana[5]. Moreover, the vimanik shastra of sage bharadwaja describes the aviation tech in the most profound manner, it has principles about the construction of vimana, the materials used in construction of flying machines, basic rules and regulation to be followed by the pilots, as well as different categories of vimanas which can fly from one place to another and even from one world to another. Furthermore, there are also texts describing the atmospheric properties suitable for a specific type of vimana. If we go deeper in to Vedanta sutras, we can understand that why a particular animal was used to drive a particular type of vimana ?, as found in Vedic texts that demigods like Indra's chariot was driven by Aeravata (a white elephant) , demigod Surya's chariot was ridden by seven horses etc. It has been found through rigorous searching that the animal was actually depiction of how much power did the engine of the aircraft possessed [2]. There are about 31 parts of a vimana based on function, that can be found by diving deeper in to Vedic concepts. As per the Vedic prescription of the vimanas three core metals that are suggested for their construction: Somaka, Mourthwika, & Soundalika [13]. The properties of these metals is that these have good strength to weight ratio and heat absorbent and resistance. It has been observed in Vedic literatures that mercury was used to fuel most of the ancient aircrafts, however it is believed that the use of metal as fuel is difficult as in order to use it for propulsion, it first have to be vaporized, and then fed to a thrust-discharge chamber. After that it is ionized, transformed in to plasma, then it is being accelerated through small nozzles to be discharged out of the engine at high velocities [18].

II. FOUR BASIC TYPES OF VIMANAS MENTIONED IN THE VEDIC TEXTS

In ancient literatures it is described that there were three different types of vimanas pertaining to the yugas or four ages. It is said that there are four yugas namely: Krita yuga, treta yuga, dwapar yuga and Kali yuga (present age). In conformity with Vedic texts dharma (righteousness) had four legs in krita yuga and the population born in this age was by birth very righteous adorned with special qualities, though vimanas were not there in this age as people were self-efficient to go anywhere by the powers of mind and will. By the treta yuga the righteousness among population depleted and so were the superpowers of the humans and dharma was left with three legs, this is when the first class of vimanas or flying machines came in to the picture. The people in age got skilled with divine mantras or hymns and the vimanas of mantrik series were flown. The great pushpak vimana, ajamukha vimana and 23 other types of vimanas belonged to the treta. Then came the next yuga i.e. the dwapar yuga where the dharma got reduced further having been left with two legs. In this age the vimanas of the tantrik category came in to being. Bhairava, dronika, ambareesha and 53 others affiliated to the dwapar age. And as of now we are living in this age of kali where dharma is on the edge of getting completely wiped out relying on only one leg. Here as we can experience, almost everthing is man-made or artificial and no mantrik or tantrik series of machines / aircrafts can be powered, the kritaka (artificially powered) planes are flown. In the Shaunaka Sutra, there are 25 variants of kritaka series are mentioned. [9] Out of these four basic types are discussed below:-

A. Shakuna Vimana



Figure 2 Image depicting the bird-like Shakuna vimana

As depicted in the above image, the Shakuna vimana was a plane which has bird like features. It is constituted of the following: floor board, three wheeled hinges having four holes, a hollow mast made of haatkaasya(a variety of metal), pipes for air suction, four heaters, a water jacket, a fuel tank, two wings, a shakuna yantra, a tail portion for enabling the plane to fly, a heat engine etc. Also, it has several tiers inclusive of special machinery. In addition to this, the floor board is constructed from raja loha which is made from ammonium chloride, mercury borax, Bengal gram, mica, silver and panchamrita. Each of the constituent is mixed and heated at about 800 kaksha or a unit of temperature and then poured out. In the vimana's construction a notable importance is given to its tail part which is responsible for generating lift [6].

Since birds have been the primary inspiration for the humans to reach skies, various attempts have been made in order to construct aircrafts based on bird-like flying features. Delfy is one such attempt. It is a micro ornithopter with an onboard camera for enabling a vision -based navigation [7].

B. Sundara Vimana

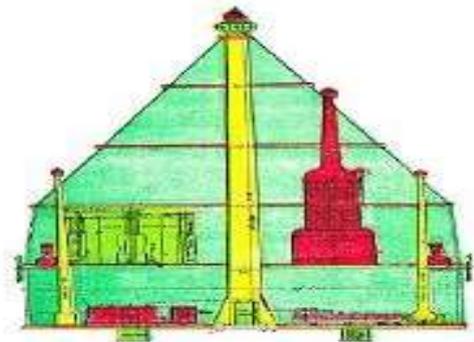


Figure 3 An illustration of Sundara vimana

Illustrated above is a vertical section of Sundara vimana mentioned in Vedic scriptures. This aircraft was similar to rockets and had a silvery luster [12]. Although, not much in depth is found about this aircraft but as per Lohatantra text it is speculated that it was made of vatamitra metal. The working oil was made of 3 components (classified)[15]. It is expounded in the Vedic literature that the Sundara vimana was built solely for air flight and included different parts like a ground plate, five engines using gas a working fluid, a chimney for smoke, a metallic pipe for blowing wind, a four-faced heater, an electric generator and an outer shield[6]. The supporting pillars in the vimana were made from mica [8].

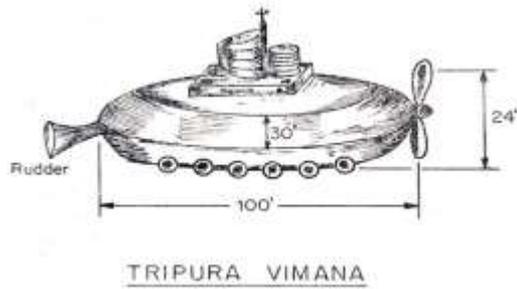
C. *Tripura Vimana*

Figure 4 Representation of 3-levelled Tripura vimana

According to Vedic concepts this is a three storied vimana as it can be inferred from the above illustration [12]. As the name suggests, this plane could fly not only in air, but could also sail over water and driven over land. The power was generated through solar generators, and other classified electric engines. This aircraft is said to oval shaped having length, width and height to be 100 ft, 24 ft and 30 ft approximately. It also had a kshirpata (milk cloth) shield in order to resist the water to enter the machine[6]. This magnificent aircraft was built of trinetra loha, which made it extremely light in weight. The trinetra loha had a peacock feather like shine, heat resistant, and indestructible [8].

D. *Rukma Vimana*

Figure 5 A depiction of Rukma vimana

The above picture outlines the structure of Rukma vimana in accordance with the revelations from revealed scriptures. This aircraft was meant for operating in the air only [6]. It is believed to be five storied. It had a hover craft like appearance with a golden luster. Base construction material is raja loha which was mainly used in flying vehicles for its heat absorbing properties [15].

III. HOW HAS MODERN SCIENCE AND TECHNOLOGY DISDAINED THE ANCIENT LEGACY OF OUR SCRIPTURES

In the race of becoming technologically civilized, modern science is centering about finding ways to build invincible machines using destructible methods which are not only harming nature but cultures too. Specifically, the space and aviation industry are in a hunt for ways of weaponizing the aircrafts by using highly fragile materials. But making an aircraft or warcraft durable still stays to be a challenge. According to former scriptures and texts we can come to an inference that the science and technology our ancestors possessed was far too advanced and un-contaminating than what we have today[14]. The materials used and synthesized were also of high stature making the aircrafts nearly infrangible. We can find descriptions as well as manufacturing procedure & processes of such materials in Vedas and other primitive texts based on alchemy.

India has a broad and rich history in the subject matter of alchemy and so do our predecessors. They had profound

knowledge and art which inspired them to create such rasas (materials) which added so much quality, luster, consistency and strength to whatever structure they were used to construct. From the epics like Ramayana, Mahabharata and Srimad Bhagavatam there is a great deal of knowledge which is left for us to explore and yield further.

The early Indian ancestors propounded that the geological formation of metals is strictly attributed to the forces of earth keeping the force of gravitation as foremost. These forces were: atmospheric forces, pressure forces at different layers of earth, solar radiation, gravities of sun and moon along with interplanetary & intergalactic forces as well as forces of the universe [8].

Since the ancient era vimanas as described in the Vedic literatures were humungous in sizes and complex in designs, therefore the materials that were used to craft these ariel palaces must also have possessed that kind of strength and other concentrated properties that were required to power and fly those giants. The materials used were mostly dependent on the properties of the atmosphere and the type of vimana. As the technology that have been described in the Vedas was developed by ancestors of great knowledge and understanding, we can infer that the base materials were so designed & manufactured that they do no harm to nature and yet provided desired features to the vimanas. These ancient aircrafts were purely categorized depending upon the human evolution, ability to understand and performance based on brain function for controlling the vimanas [16].

Studies have shown that the ancient vimanas were made of such kind of materials that made it easier for the aircraft to fly at seemingly high altitudes, not restricting to only one kind of atmosphere as most of these vimanas flew from one loka to another. In accordance with the Samarangana sutradhara, lead, copper and iron were used in the making of such vimanas and usage of mercury as a propellant [3]. The knowledge for the manufacturing of such materials is cognitively mentioned in Rasagrandhas as well as Vimanika Shastra. As mentioned earlier there were three major categories of metals used in ancient aviation — Somaka, Mourthwika and Soundalika. Apart from having enough weight to strength ratio, the material should also possess a good heat resistance and absorption capability. The key metals are believed to have been drawn from different layers of the earth's crust having varying pressure constraints. In order to acquire the specific types of alloys suiting specific type of vimanas, about 16 different alloys are stated to have been processed from 3 core-metals by combining them with different properties as :- Ushnapa, Ushamambhara, Ushnaahana, Vishambhara, Amalahana, Sheetahana, Vishalyakrit, Garalaghna, Rajamlatrit, Veeraha, Panchagna, Agnitrit, Bharahana, Vijamitra. Also, in the third mine of the seventh layer of earth's crust are metallic ores of somaka category and there are 38 variants of them. Out of these 38 are three ores are those which are extracted on the basis of high heat resisting properties [17]. It is stated that the three root metals are mixed in required proportions and then heated for manufacturing materials with varying properties and luster [17].

Conclusion

After brief analysis it can be concluded that the knowledge that is stored in our sacred texts holds the key to a bright future of modern applied sciences and as well as space and aviation industries. Though there are some gaps, which may be due to time factor and lack of understanding but still if we find a way to combine both the, the knowledge of ancient science and that of modern science by filling up the gaps, the new era of technology is not far. In this review we have

discussed the different types of vimanas which are mentioned in the Vedas giving a stress on the materials that were used in their respective construction. In addition to this, we have explained the three chief root metals which were combined together in different proportions in order to construct different types vimanas. It is briefly written in ancient scriptures how the metals for the construction of aircrafts were manufactured and how these were extracted from different layers of the earth. The scientists and theologians who earlier mocked Vedic knowledge quoting it as frictional are now working on the same. Our ancestors have left behind for us a priceless treasure in the form of scriptures which if used for the benefit of mankind can change the fate of how we look at the world.

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