

# समाचार पत्रों से चयित अंश Newspapers Clippings

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## India's Agni vs China's Dongfeng missile: Which is more powerful

By: Vikas

*War is the worst possible outcome of a diplomatic fallout between two countries and any nation would like to avoid it all costs. It not only results in massive loss of lives but also drains a country economically, pushing its development back by decades.*

When two nuclear powers with sufficiently developed ballistic missile programs lock horns over an issue that can potentially spiral-out into a military conflict, all diplomatic options must be explored to ensure that peace prevails. India and China are involved in a standoff at Doklam, near Sikkim, for close to two-months now. Both sides, despite being engaged in talks at different levels, are also indulging in a fair bit of chest thumping which is not sending a good signal to the international community.

China's statement hinting that military action could be considered if India does not pull back its troops from Doklam has left many people wondering whether India and China will go to war. Well, it seems highly unlikely as both nations have matured leadership, but it wouldn't do any harm to try and understand India and China's ballistic missile capabilities.

### **Agni missiles: How far can they strike in Chinese territory?**

Agni series has five missiles with varying strike capabilities and ranges. Agni 1 is a single stage solid fuel missile with a range of 1250 kms while Agni 2, an improvement of Agni 1, is a two-stage missile capable of striking targets 2000 kms away. Agni 2, if launched from a strategic location, can target western, central, and southern China.

### **Agni 4 has a range of close to 4,000 kms**

Agni 4, however, can strike targets in nearly all of China, including Beijing, provided they are launched from the northeast. All the missiles in the Agni series are capable of carrying nuclear warheads. On 19 April 2012, India made its entry into the Intercontinental ballistic Missile (ICBM) club after the successful test launch of its indigenous Agni V missile. Time and again International defence experts, especially the Chinese, have claimed that India has been understating the range of its intercontinental ballistic missile Agni-5. India initially did not divulge the exact range that the missile can strike but later DRDO hinted that it has the capability to reach 5,000 kms.

### **China has accused India of understating Agni 5's actual range**

Chinese experts say that the missile actually has the potential to reach targets 8,000 kilometres away and that the Indian government had deliberately downplayed the missile's capability in order to avoid causing concern to other countries. If the 8000 kms theory is true then India can strike whole of China even if the missile is launched from Southern India. Agni-V also features Multiple independently targetable reentry vehicle (MIRVs) with each missile being capable of carrying 2-10 separate nuclear warheads. Each warhead can be assigned to a different target. One of the main advantages of Agni missiles are that they all use solid fuel which greatly reduces their launch time. If the missile is fitted to a mobile launcher, it can be launched within minutes. Some of the Chinese missiles use liquid propellant, which take time to launch compared to solid fuelled missiles because of the time needed to fuel the missile.

### **China's Dongfeng: Lethal missiles that can reach even the United States**

Dongfeng is a family of missiles developed by China consists of short, medium, intermediate-range and intercontinental ballistic missiles. Development of Dongfeng missiles started in the 1950s with Soviet assistance after signing of Sino-Soviet Treaty of Friendship, Alliance and Mutual Assistance in 1950. Dongfeng 1 and Dongfeng 2 were the first two developed in this missile family with ranges of 500 kms and

1,250 kms respectively. Both were in use in the 1960s but are not in operation anymore. Dongfeng 3 or DF 3, considered to be a copy of soviet R-14 Chusovaya missile, had a range of 2,500 kms, but even this has been retired from the service and replaced by DF 21. Dongfeng 4 and 5 were also developed, while the former will be replaced by DF-31 and the latter has an improved version, DF-5A, that can carry nuclear warheads over 12,000 kms. Several other missiles in the series also exist but is our concerns are DF-21, DF-26 and DF-31.

### **Dongfeng missiles at a military parade in Tiananmen Square**

China has reportedly admitted that India's Agni-V is comparable to its DF-26 ICBM which is also nicknamed Guam Killer. The IRBM, with a reported range of 3,500 km, has the ability to reach a major US base in Guam in the western Pacific. DF-26, a two-stage solid fuel rocket IRBM, measures 14 meters long with a diameter of 1.4 meters and a launch weight of 20 tonnes. It can carry a nuclear or conventional warhead that weighs 1,200-1,800 kilograms and has an estimated maximum range of more than 5,000 km. Image courtesy:

### **Is India developing a 12,000 kms range missile - Surya?**

Well, there is no confirmation from DRDO as of now but many are speculating that India is working on a long-range ICBM capable of striking targets 12,000 kms away. Some say that it is Agni-6 while others say it might be named Surya. It is likely to be a three-stage missile with first stage being borrowed from ISRO's PSLV. If this is true, then it is sure to send shivers down enemy's spine.

### **Conclusion:**

So, Chinese missiles can reach whole of India and what goes against India is that it is not accurately known how many Agni 4 or Agni 5 are in service. We must understand that test firing a missile is totally different from it being ready for deployment. One also has to bear in mind that before comparing missile development programs, we must consider where the starting line was. China's program began way back in 50s with Russian help while India's program is totally indigenous.



*Thu, 10 Aug, 2017  
(Online)*

## **Fire wall: Why Agni Missile Department holds strategic importance for India's safety**

*By Amarnath K. Menon*

*Agni Missile Department, established in 1989, is responsible for creating nuclear missiles like Agni-I, Agni-II, Agni-III, Agni-IV and Agni-V. The missiles belong to the family of medium to intercontinental ballistic missiles and were named after one of the five elements of nature.*

From the start, Agni was appreciated as a distinct product and, sensing its strategic importance, separated from India's Integrated Guided Missile Development Programme. Agni-I, with a range of 700 kilometres, was first test-fired in 1989. Agni-II, an intermediate range ballistic missile, was tested in 1999. It has a range of 2,000-2,500 km and can carry both conventional and nuclear warheads. Agni-III, with a range of 3,500-5,000 km, was inducted in 2011, allowing strike capability deep inside neighbouring countries. Agni-IV was developed within a similar range but shorter flight time. It can carry a 1,000 kg payload. Agni-V, with a range of over 5,000 km, was a formidable addition to India's strategic defence. Agni's pioneer, A.P.J. Abdul Kalam, would always turn poetic when talking about it. "Friends, you now have the fire to touch the Agni," he once wrote in his notebook.

In future, Agni-V is expected to feature the Multiple Independently Targetable Reentry Vehicle concept, with each missile capable of carrying 2 to 10 separate nuclear warheads. Each warhead can be assigned a different target. Alternatively, two or more warheads can be assigned one target. India is also developing Agni-VI, with a range of 8,000-10,000 km.

## Armed And Ready

Agni-V is the most sophisticated and lethal in the series of medium to intercontinental range ballistic missiles being developed by India. It can strike targets more than 5,000 km away and carry a nuclear warhead of over 1 tonne. On induction, the missile will put India in a super-exclusive club of countries with ICBMs, alongside the United States, Russia, China, France and Britain.

### Did you know?

Hours before the first test, Kalam got a call from a top government official about US-NATO pressure to delay the launch.



*Fri, 11 Aug, 2017*

*(Online)*

## DRDO Signs 96 TOT Agreements with Private Sector

Defence Research and Development Organisation (DRDO) has entered into Technology sharing agreements with private Indian industries with total of 96 Licensing Agreement for Transfer of Technology (LAToT) have been signed for worth Rs 22.36 Cr, Defence Minister Arun Jaitley informed the Lok Sabha on Friday.

He said presently MoUs have been inked with major industrial groups including PHD Chambers of Commerce & Industry (PHDCCI), Confederation of Indian Industry (CII), National Research Development Corporation (NRDC) and Associated Chambers of Commerce and Industry of India (ASSOCHAM).

To a question, Mr Jaitley said the Transfer of Technology (ToT) for DRDO developed products to other countries can be done only after meeting the requirements of Indian Armed Forces and export policy of the country.

“ToT of Explosive Detection Kit Technology developed by DRDO has been done with M/s Crowe & Co., USA and has been evaluated by US Armed Forces,” he said.



*Mon, 14 Aug, 2017*

## Ministry to decide on buying armed copters

*By Ajay Banerjee*

The Ministry of Defence (MoD) is to decide if 11 more attack helicopters are to be procured as a follow on to the existing order of 22 ‘AH-64-D Apache’ copters from US-based giant Boeing.

The Defence Acquisition Council (DAC), the highest decision-making body of the MoD, is to meet after Independence Day. However, “wrinkles” of the purchase are still being ironed out for the project that is expected to cost about \$900 million ( Rs 60,000 crore). The DAC will assess a request made by the Army, which wants the MoD to exercise the “option clause” that allows the purchase of 11 more helicopters. The MoD’s finance wing has its reservations and is not in favour of giving the copters to the Army as the first lot of 22 is contracted for the Air Force.

The Services Capital Acquisition Categorisation Higher Committee, with representatives of the IAF and the Army, has decided that the 11 copters should be taken as the capability was needed. “The narrow matters of inter-service operations cannot hold back the use of helicopters,” an official said.

The first lot of 22 copters approved by the MoD in September 2015 has been allocated to the IAF, the Army wants the follow-on order for itself. The US copter had won the bid in an open competition beating the Russian built Mi-28-H.

For a number of years, the Army and the IAF have been sparring over who should operate the future fleet of Apache copters. The Army initially asked for the gunships to be inducted into its ranks, or for the IAF to at least share the helicopters with the ground forces. The IAF, however, rejected both proposals.

In 2014, the MoD had an in-principle agreement allowing attack helicopters for the Army. Till now, the Army has only 'non-armed' helicopters. The MoD has accepted the need to have some 39 armed helicopters for the Army which will fly overhead when ground-based troops move in for attack. Such copters usually carry missiles.



Mon, 14 Aug, 2017

## Warship Shaurya to bolster Coast Guard's firepower

By Ajit K Dubey

Bolstering Coast Guard's sea guarding capabilities, Union petroleum minister Dharmendra Pradhan on Sunday commissioned its latest warship ICGS Shaurya. "The Coast Guard has been helping the ONGC and petroleum companies to produce in places like Bombay High for last many decades. Today, we have commissioned the ICGS Shaurya, which is the biggest ship in the force and will help in safeguarding the southeastern seas of the country after its deployment in Chennai," the minister said. The fifth of Coast Guard's 105-metre ships was commissioned at a ceremony in the Goa Shipyard Limited facility in Panaji.

The government PSU shipyard had been awarded the contract for building six such ships and Shaurya will be followed by the final boat ICGS Sujay in November. The vessel is capable of cruising at 50kmph and has a range of 12,000km. It has been fitted the integrated machinery control system and integrated bridge system along with the CRN-90 gun. The indigenously designed ship is capable of search and rescue operations, pollution control and external firefighting and will be deployed for ocean surveillance and for monitoring sea lanes of communication. "The ship would be deployed in Chennai from where it will provide safety and security to the southeastern waters of the country," Pradhan said.

The minister said Prime Minister Narendra Modi has been calling for the development of India into a blue-water economy and if agencies such as the Coast Guard continue to protect the borders, this goal can be accomplished. Coast Guard has been at the forefront of maritime security in the last few years and recently, it apprehended a boat that was used by Pakistani nationals to supply drugs worth `3500 crore into India. ICGS Shaurya is the second boat to be launched by the Coast in the last 15 days and one more of its ships would be inducted by Mauritius on August 16. "The launch of the ship of the series in quick succession speaks of our unwavering commitment towards timely delivery of ships," GSL chairman and MD Shekhar Mital said. The shipyard is working on the prestigious `32,000 crore project for producing eight mine counter measure vessels for the Navy along with `2000 crore project to build two Talwar class follow on frigates for the force.



Mon, 14 Aug, 2017

## इस महीने बड़ा सैन्य अभ्यास करेंगे भारत-रूस

नई दिल्ली: क्षेत्र के बदलते सुरक्षा हालात की पृष्ठभूमि में पुराने रक्षा सहयोगी भारत और रूस इस वर्ष अक्टूबर में बड़ा सैन्य अभ्यास करेंगे जिसमें पहली बार दोनों देशों की थलसेना, नौसेना और वायुसेना शामिल होगी। सैन्य सूत्रों ने बताया

उन्होंने कहा कि भारत पहली बार सेना की तीनों शाखाओं के संयुक्त अभ्यास में किसी अन्य देश के साथ भाग ले रहा है, जिसमें थलसेना, नौसेना और वायुसेना इतने बड़े पैमाने पर हिस्सा लेंगे। सूत्रों ने बताया कि इस बड़े सैन्य अभ्यास में 350 सैनिक हिस्सा लेंगे और मेजर जनरल रैंक के अधिकारी के नेतृत्व में एक सैन्य टुकड़ी वहां जाएगी। नौसेना और वायुसेना की टुकड़ियां भी बड़ी होंगी।



Mon, 14 Aug, 2017

## Is the Army doing enough for mentally ill soldiers?

*Mere lip service to its glory won't do. It needs more counsellors and psychiatrists*

When it comes to proclaiming their admiration for the Indian Army, our political parties tend to outdo each other. Yet, the very real problems the forces face are often left unaddressed, a significant one being stress-related deaths in the form of suicides or fratricides.

Since 2014, according to a defence ministry submission in Parliament, 310 officers have committed suicide and 11 cases of fratricide were reported in this period. The Army works in extremely difficult conditions even in peacetime. The hierarchies in the forces are rigid and do not encourage those from the lower ranks to express themselves freely. Those in hardship postings or facing civil strife work for months on end without leave or proper sleep and food, exacerbating mental disorientation and illness. On and off, jawans have complained about their working conditions, but the response has often been to discipline the 'errant' soldier. The welfare of the Army should be a matter of much more concern to the political class given that it has to guard hostile borders with at least two countries. Spending months away from their homes also contributes to a sense of loneliness and disconnectedness.

The Army should have far more counsellors on hand as well as psychiatric help. It should not be seen as a disadvantage for a soldier to seek such help, in fact it should be encouraged. They should be assured that this will not lead to them facing any discrimination. The issue of post-traumatic stress disorder is talked about a lot with relation to the US military, but in India soldiers facing hostile circumstances, as for example in Kashmir, are rarely treated for this once they leave the theatre of operations. For the Army to be an effective fighting machine, the mental health of its soldiers must be a priority. Mere lip service to the glory of the Army will do little to make things easier for soldiers whose task is unenviable even in the best of times.



Mon, 14 Aug, 2017

## Army, PLA Meet That Never Happened

*By Shaurya Gurung*

*Diffusing Doklam Standoff: Military meeting is important because it is part of New Delhi's efforts to calm tempers and end the protracted standoff between the Indian and Chinese troops*

**'Arrangements were made from our side (for Friday meeting), but Chinese didn't show up'**

A crucial meeting between the Indian Army and Chinese PLA in Nathu La, which was scheduled to take place on Friday to defuse the Doklam standoff, didn't happen.



A senior government official said: “The arrangements were made for the meeting from our side, but the Chinese didn't show up. They (China) were undecided on attending it.”

ET had earlier reported that a highlevel meeting between the Major General-level officers of the Indian Army and PLA was scheduled to take place in Sikkim on Friday . Other media reports claimed that it took place and the discussions were inconclusive. However, what has come to light is that the meeting never happened. With this meeting, India was aiming to ensure peace along the Line of Actual Control (LAC).

During the beginning of last week a flag meeting was held between the Brigadier-level officers of the two armies. In this meeting, India told China not to change status quo by constructing road towards the Jampheri

Ridge until the standoff ends and the ownership of Doklam -a disputed territory between China and Bhutan -is decided. China, in turn, told India to withdraw troops.

The military meeting is important because it is part of India's efforts to calm tempers and end the standoff between the Indian and Chinese troops.

India is also interested in knowing whether China will send its representative to attend the ceremonial border personnel meetings (BPMs), which is to be held on August 15. BPMs are held every year at five locations along the 3,440-km-long LAC during important Indian and Chinese occasions, such as Independence Day , Republic Day and PLA Day (August 1). These locations are Daulat Beg Oldie and Chushul in Ladakh, Bum La and Kibithu in Arunachal Pradesh and Nathu La in

**Will China Attend Aug 15 Meet?**

India interested in knowing whether China will send its team for the ceremonial border personnel meetings (BPMs), slated for August 15



**BPMs are held every year at five locations along LAC on important Indian and Chinese occasions, such as Independence Day, Republic Day and PLA Day (August 1)**

Indian Army has invited PLA for the August 15 meeting

**PLA didn't invite its Indian counterparts for border personnel meetings on August 1, even though such invites are sent every year**

Sikkim. The meetings are aimed at ensuring peace and harmony between the two armies.

The Indian Army has sent its invite to the PLA for the August 15 meeting, according to another government official. If PLA attends the meetings, it would indicate an improvement in ties. It is important to note that PLA didn't invite its Indian counterparts for BPMs on August 1, even though such invites are sent every year.

**MAIL TODAY**

Mon, 14 Aug, 2017

## Chinese military begins work at bridge in Ladakh

By Ashraf Wani

Even as the Doklam standoff continues, China has begun building a bridge in no man's land, near the Line of Actual Control in Ladakh. Security agencies have been tight-lipped on the Chinese aggression. Dr Sonal Dawa Lopo, Chief Executive Councillor of Ladakh Autonomous Hill Development Council, told INDIA TODAY TV that the issue will be raised with the government.

The Narendra Modi administration should immediately object to the construction of the bridge, he said. The Doklam standoff began in mid-June after Indian troops stopped the Chinese Army from building a road in the Doklam area, which is near the Sikkim section of the India-China border. India blamed China for trying to alter the status quo and attempting to move the India-China Bhutan tri-junction point to the south.

Beijing, on the other hand, has slammed New Delhi for what it says is a transgression by Indian troops into Chinese territory.

Mon, 14 Aug, 2017

## In a first, Russia to train women fighter pilots

Moscow: Female candidates are to be accepted for the first time to train as pilots for Russia's air force, defence minister Sergei Shoigu said on Saturday, adding there were so many applications that "we can't ignore them".

"There are many young women who would like to become military pilots. We have received hundreds of letters," he said, according to a ministry statement.

"That's why we've decided that this year we will enrol a first group of women at the military academy of Krasnodar," in southern Russia, he said.

"There will be few of them, 15 in all. But given the quantity of applications that we receive, we can't ignore them. From October 1, the first group of women will start to train to become pilots," he said, adding that he hoped they will be qualified in five years.

Since 2009, the Krasnodar flying academy has accepted female students but not for pilot training, according to the TASS news agency.

In 2014, a senior Russian defence ministry official, Ruslan Vassilev, told Echo Moskvi radio that some 45,000 women serve in the Russian army, although they are barred from some functions, notably combat roles.

In total Russia's armed forces numbered nearly 2 million people this year, including 1 million on active service, according to official figures.



Mon, 14 Aug, 2017

## Satellite built by ISRO-industry partnership set for launch

By Madhumathi D.S.

*1,400-kg IRNSS-1H is first step in building closer links with private participants*

In what is seen as the first move for an independent Indian satellite-building industry, the first of two replacements or spare navigation satellites assembled in partnership with a private industry consortium, was flagged off from Bengaluru on Saturday at 4.30 a.m.

The 1,400-kg IRNSS-1H satellite, is due to be deployed in space from Sriharikota this month-end. It will back up the crippled IRNSS-1A, on which all three rubidium atomic clocks have failed.

Until now, public and private sector industries have only supplied satellite parts, hardware or material required by the Indian Space Research Organisation. With 1H, they are being readied to build satellites too. ISRO, which says it has only half the satellites it needs, has been trying in recent years to quickly make more satellites and now wants to prepare domestic industry to produce them, as also its launch vehicles.

The first steps

Early last year, ISRO Satellite Centre (ISAC), which assembles Indian satellites, started one such initiative with two spare navigation (IRNSS or NavIC) satellites. Seven of them, 1A to 1G, are in orbit. Over the last six months, ISAC roped in about 70 personnel from a six-company consortium for assembly, integration and testing. On August 12, the first of the resulting products, 1H, left ISAC for Sriharikota. ISAC Director M. Annadurai credited about 25% of the realisation of 1H to the external team and called it 'a modest beginning.' "1H is the eighth NavIC satellite. The industry team was trained and was an active part of mechanical assembly, electrical integration, testing in various modes and thermovac vibration tests."



ISAC used a separate clean room for the job. The external team watched the integration, and was part of the multiple checks. Dr. Annadurai said the industry team would have bigger responsibilities with the next one, IRNSS-1I, that will soon get into assembly. “I am confident that they can do up to 95% of the tasks, but under our supervision. We will change the ratio of work, hand over all hardware and handhold them through a similar cycle.”

### **Space-grade lessons**

Last December, ISAC signed the two-satellite contract with a consortium of six companies led by Alpha Design Technologies Pvt Ltd, Bengaluru.

About their work on the first satellite, Colonel H.S. Shankar (retired), chairman and MD, Alpha Technologies, said, “It was a fantastic exposure to space-grade work, the priority given to quality and elaborate tests and documentation they do at every stage to eliminate any error.” They would further finetune their work on the second satellite, he said.