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समाचार पत्रों से चयित अंश

Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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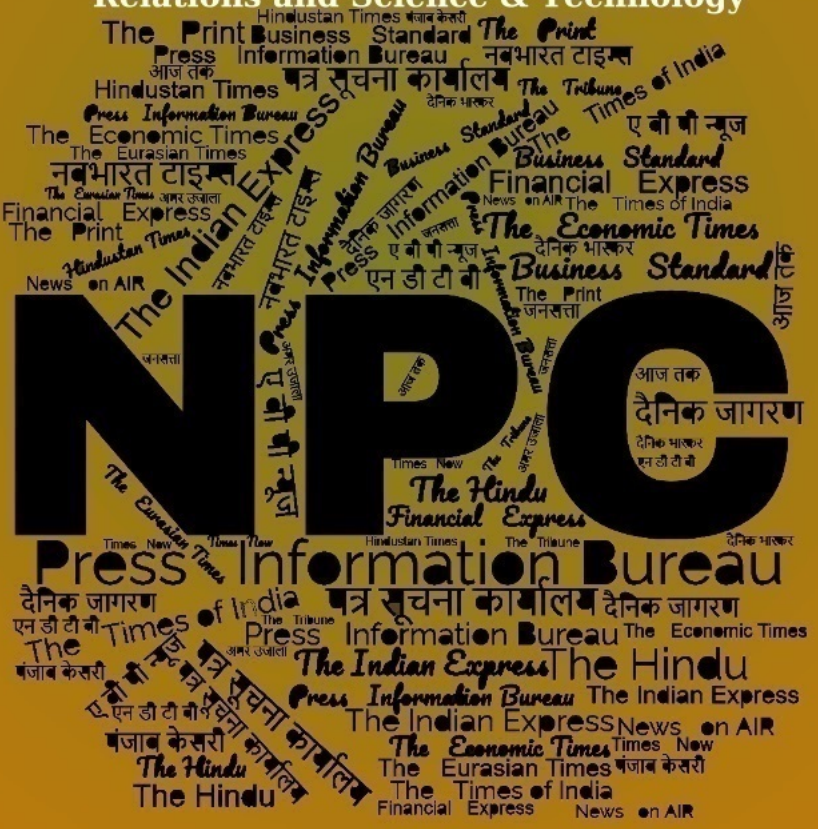

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Thu, 14 Mar 2024

Launch of 25T Bollard Pull Tug, Bajrang at M/S Shoft Shipyard Pvt Ltd, Bharuch, Gujarat

Third 25T Bollard Pull (BP) Tug, Bajrang was launched by **Cmde V Pravin, AWPS (Mbi)** on **14 Mar 24** at M/s Shoft Shipyard Pvt Ltd, Bharuch, Gujarat. This Tug is a proud flag bearer of "Make in India" initiative of Govt of India.

Contract for construction and delivery of three 25T BP Tug was concluded with M/s Shoft Shipyard Pvt Ltd (M/s SSPL), an MSME, in consonance with "Aatmanirbhar Bharat" initiative of the Government of India. These Tugs are being built under the classification rules of Indian Register of Shipping (IRS). The availability of Tugs will provide impetus to Operational commitments of ***IN*** by facilitating assistance to Naval ships and submarines during berthing and un-berthing, turning and manoeuvring in confined waters. The Tugs will also provide afloat firefighting assistance to ships alongside, at anchorage and will also have capability to conduct limited Search and Rescue Operations.

https://pib.gov.in/PressReleasePage.aspx?PRID=2014597

Hindustan Times

Fri, 15 Mar 2024

US sends Letter of Acceptance to India for Predator drone purchase

India and US have further cemented defence cooperation with the Biden administration sending the final letter of acceptance (LOA) to the Defence Ministry for acquisition of 31 MQ9B Predator drones from General Atomics through the government to government route. The US sent the classified LOA for the nearly $4 bn acquisition to India this week.

According to officials based in Washington and Delhi, the final LOA, with the negotiated price of 31 armed drones by US with the manufacturer, was sent to the Defence Ministry on March 11, belying reports that the deal was held up by the Biden Administration after the alleged plot to assassinate Khalistani radical G S Pannun.

The US State Department notified the drone deal on February 1, but the draft LOA was kept open for possible objections from US lawmakers for a mandatory 30 days. The final LOA was sent to India after there were no vetoes from the lawmakers to the US deal with India.

Now that the LOA has been received the deal will be studied by the Indian Navy, the lead player in the acquisition, and then forwarded to the Cabinet Committee on Security (CCS) for approval via the Defence Minister if the price is found to be satisfactory. The Indian Navy will get 16 MQ 9B drones, and the Indian Army and Indian Air Force will get eight each as per the agreement between the armed forces. India has decided to purchase 31 drones with 171 Hell-fire AGM 114 R missiles, laser guided bombs, missile launchers, ground stations, anti-submarine sonobuoys and the full encryption as well as surveillance complement package for the state of the art platform.

The letter of acceptance is a response to India sending a letter of intent to purchase 31 drones to the US government. Under the G-to-G route, it is the supplying government that negotiates with the manufacturer on price.

The acquisition of the 31 Predator drones by India came at a time when the lease of two Sky Guardian drones (unarmed Predators) by the Indian Navy was on the verge of expiring in January . This was first extended till March, and then a contract for further extension for four years was signed this month at a cost of $ 220-230 million.

Analysts say the India-US MQ9B deal will be a game changer in the Indo-Pacific, serving as an effective counter to the Chinese Wing Loong II armed drones, which have also been sold by Beijing to its client state Pakistan.

https://www.hindustantimes.com/india-news/us-sends-letter-of-acceptance-to-india-for-predator-drone-purchase-101710463230511.html

THE HINDU

Thu, 14 Mar 2024

Sri Lanka receives Bomb Disposal Equipment through Chinese Military Grant

Sri Lanka has received a stock of bomb squad equipment through a grant from the Chinese military, the Sri Lankan army has said.

The Chinese Ambassador in Colombo Qi Zhenhong handed over the Explosive Ordnance Disposal (EOD) equipment to the Secretary to Sri Lanka's Ministry of Defence General Kamal Gunaratne (Rtd) in a ceremony held on March 13, according to a media statement. The equipment will be used

primarily for screening, bomb detection, and disposal, according to Army sources in Colombo. The statement did not mention the cost of the equipment.

The development came a day after the United States Department of Defence commenced a training programme for Sri Lanka's Air Force for enhanced protection of the island's maritime resources, to counter illicit trafficking and monitor its exclusive economic zone. It also coincided with the Chinese People Liberation Army's recent engagement in the region, including in Sri Lanka.

On March 7, a senior Chinese military official was in Colombo for talks with the military establishment. Deputy Chief of the Office for International Military Cooperation (OMIC) of the Central Military Commission (CMC), China, Major General Zhang Baoqun met Gen. Gunaratne (Rtd) to "exchange perspectives on prevalent regional security challenges and explore avenues for joint initiatives on enhancing maritime security collaborations on mutual ground," a press release from the Sri Lankan army said.

Beijing on Wednesday confirmed that a military delegation visited the Maldives, Sri Lanka, and Nepal from March 4 to 13 to discuss further defence cooperation. During the delegation's visit to the Maldives, the island nation's Minister of Defence signed a pact with Major General Zhang Baoqun for military assistance from — and stronger bilateral ties with — China. Beijing's enhanced military engagement in the region remains a cause for concern in New Delhi, even as India and Sri Lanka maintain long-standing defence ties, and currently have an annual defence dialogue at the level of Secretary to the Defence Ministry.

The seventh round of the dialogue was held in New Delhi on February 23, 2023, where both sides agreed to "increase the complexity of bilateral exercises." Sri Lanka has a Liaison Officer posted at the Indian Navy's Information Fusion Centre for Indian Ocean Region (IFC-IOR) located in Gurugram. Sri Lanka is also part of the Colombo Security Conclave (CSC), along with Mauritius and the Maldives, and Bangladesh and Seychelles, that are observer-states.

However, the Maldives skipped the 6 NSA-level meeting of the CSC held in Mauritius in December, months after President Mohamed Muizzu was elected.

https://www.thehindu.com/news/international/sri-lanka-receives-bomb-disposal-equipment-through-chinese-military-grant/article67950574.ece

THE ECONOMIC TIMES

Thu, 14 Mar 2024

Pakistan Urges India to Comply with Stipulated Timeline of Flight Testing of Ballistic Missiles

Pakistan on Thursday urged India to comply with the timeline stipulated in the pre-notification of flighttesting of ballistic missiles as it took note of the first flight test of India's indigenously developed Agni-5 missile. Responding to a question about India testing a missile capable of carrying multiple nuclear warheads, Pakistan Foreign Office spokesperson Mumtaz Zahra Baloch

said that Islamabad had taken note of the Indian missile test on March 11 as New Delhi shared its advance notification to Islamabad. However, she said India did not follow the three-day timeline stipulated in Article 2 of the Agreement on Pre-notification of the 'Fight Testing of Ballistic Missiles'. "The agreement on pre-notification we believe must be complied with in letter and spirit," she said.

On Monday, India successfully carried out the first flight test of an indigenously developed Agni-5 missile capable of deploying multiple warheads under its 'Mission Divyastra', joining a select group of nations having such a capability. The missile with 'multiple independently targetable re-entry vehicle (MIRV)' tested from APJ Abdul Kalam Island in Odisha accomplished the designed parameters, according to the Defence Ministry in New Delhi.

Agni-V missile has a range of up to 5,000 km and it can bring almost the entire Asia including the northernmost part of China as well as some regions in Europe under its striking range. India has already carried out several tests of Agni 5 but it was for the first time that the flight test was carried out with MIRV.

https://economictimes.indiatimes.com/news/defence/pakistan-urges-india-to-comply-with-stipulated-timeline-of-flight-testing-of-ballistic-missiles/articleshow/108502028.cms?from=mdr

Thu, 14 Mar 2024

Putting India amongst the Elite: One Missile at a Time

In a significant development in India's nuclear prowess, New Delhi tested the first flight test of an indigenously developed Agni-5 missile with Multiple Independently Targetable Re-entry Vehicle (MIRV) technology. The announcement, made by Prime Minister Narendra Modi via the widely used social media platform 'X' (formerly Twitter), heralded India's entry into the exclusive league of nations possessing MIRV capability.

The milestone launch was conducted as part of "Mission Divyastra," a crucial facet of DRDO's Guided Missile Development Project, Agni. The Agni series of missiles has been a cornerstone of India's defence arsenal since the early 1990s, and this latest development comes under the indigenously developed Agni-5 series of missiles.

The announcement marks a significant bolstering of India's defence capabilities, fundamentally reshaping the regional power dynamics. With persistent challenges emanating from various fronts, and neighbouring countries like Pakistan and China, this advancement strengthens India's position in the realm of nuclear deterrence.

Understanding Mirv And Its Importance For India

MIRV stands for Multiple Independently Targetable Re-entry Vehicles. Originating in the 1960s, MIRV technology was developed to enhance the effectiveness of missile strikes by enabling the delivery of multiple nuclear warheads to different locations. This technology allows a single mis-

sile to carry multiple warheads including nuclear warheads, each capable of being aimed at a different target, thereby ensuring that a single missile can deploy multiple warheads at diverse sets of locations.

Equipped with indigenous Avionics systems and high-precision sensor packages, the Agni-5 ensures that its re-entry vehicles reach their designated targets with exceptional accuracy. Now that India has indigenously developed MIRV technology, it is a part of elite countries like the US, the UK, France, China, and Russia, which possess this technology.

Analysts believe that while the shorter-range Agni-I and II primarily targeted traditional rival Pakistan, the subsequent versions, boasting extended ranges, signal India's strategic pivot towards addressing potential threats from China.

The MIRV technology was initially developed by the United States, which produced a MIRV Intercontinental Ballistic Missile (ICBM) in 1970 and a ballistic missile launched from a submarine the following year. A submarine-launched ballistic missile (SLBM) and an intercontinental ballistic missile (ICBM) equipped with MIRV capability were later developed by the then Soviet Union.

What sets the MIRV system apart is that, unlike conventional missiles that carry a single warhead, Multiple Independently Targetable Re-entry Vehicles (MIRVs) possess the capacity to deliver multiple warheads. These warheads can be deployed at varying speeds and trajectories, enabling strikes on targets spanning distances of up to 1,500 kilometres. Land-based MIRV missiles, in particular, are deemed notably destabilising.

The utilisation of MIRVed missiles on submarines substantially enhances their survivability, as nuclear submarines are notoriously challenging to detect. Consequently, India's acquisition of this capability is, thus, an enunciator of India's burgeoning technological prowess and fortifies its strategic deterrence posture.

According to strategic analyst Brahma Chellaney, the incorporation of MIRVs in the Agni-5 enhances India's capacity for a second-strike capability against China, which has been actively expanding its nuclear arsenal. Experts assert that India's pursuit of MIRV technology is motivated, in part, by the imperative to surmount Chinese ballistic missile defence systems, as MIRVs possess the ability to circumvent such defence through the deployment of multiple genuine or decoy warheads. Moreover, MIRV technology offers the tactical advantage of multiple targeting options, enhancing cost-effectiveness by enabling a single missile to engage multiple tactical and strategic targets. Furthermore, the development of critical new weapon systems will likely strengthen India's position in future arms control negotiations.

However, India's strides in nuclear advancement have not been universally lauded. Hans Kristensen, Director of the Nuclear Information Project at the Federation of American Scientists, expressed reservations regarding India's test of MIRV-equipped missiles, cautioning that operationalising MIRV capability could enable India to target more objectives with fewer missiles, potentially escalating nuclear tensions.

Conversely, Indian scholars contend that MIRV technology reinforces India's adherence to the principle of no-first-use, as possessing credible missile systems capable of evading missile defence mitigates concerns regarding a "use them or lose them" scenario. In this regard, the acquisition of

MIRV capability bolsters India's nuclear deterrence posture, aligning with its longstanding policy of exercising restraint in nuclear matters.

If a country wants to ensure the efficacy of deterrence, it must first have the ability to inflict substantial damage on its adversaries. Without such capacity, deterrence loses its effectiveness, indicating a lack of strength, or worse, cowardice.

Since its landmark Pokhran-II tests in 1998, India has consistently demonstrated responsible nuclear stewardship, underscored by its unequivocal commitment to a "no first use" policy. It has consistently shown great restraint during very provoking situations over the decades. China and India are currently the only two nuclear powers to formally maintain a no first use policy, adopting pledges in 1964 and 1998 respectively.

Thus, amidst escalating regional tensions, India's adoption of MIRV technology should be contextualized within the broader framework of maintaining strategic stability and should not be seen as a destabilising development in the sensitive region it is situated in.

https://www.news18.com/opinion/opinion-putting-india-amongst-the-elite-one-missile-at-a-time-8815580.html

THE ECONOMIC TIMES

Thu, 14 Mar 2024

Incredible momentum in India-US defence relationship, says Pentagon official

There is a paradigm change and incredible momentum in the US-India defence relationship which is now defined more by the overall trajectory rather than by differences on key issues, a senior Pentagon official has said. The remarks by Siddharth Iyer, Director for South Asia, Office of the Secretary of Defense (Policy), Department of Defense, came at a roundtable on the future of the USIndia Defence Partnership with a focus on technology collaboration and maritime strategy.

The roundtable was organised by The US-India Strategic and Partnership Forum and CUTS International, a non-profit body on trade relations. "Incredible amount of progress (in India-US relationship) has been made not just in the last two years, but even the last 12 months. I think that just sort of underscores the degree to which there's incredible momentum and the relationship now is defined more by the pace and the sort of overall trajectory rather than by differences and divergences on key issues," Iyer said.

"The overall paradigm of the relationship I think has changed, particularly from the perspective of the Department of Defense where I think historically security and defence cooperation has traditionally been viewed as an area sort of too sensitive or traditionally lags other areas of cooperation," Iyer said. According to Iyer, there are three areas of significance in the defence relationship.

"The first of course is technology cooperation which is pretty deep...Another area that I think for people who have watched this relationship over the decades where there's been sort of tremendous upward momentum has been in the area of operational sort of engagements between our militaries," he noted. The final area of growth in the partnership has been in the scope and texture of our high-level bilateral engagements, he said. "At least from the outside, it's apparent that there's just a very high frequency of engagements between our senior leaders, from the President, Prime Minister, our national security advisors and cabinet officials.

It would be hard to find a month in the calendar year when there's not a high-level exchange, and then probably at least a handful of mid-level exchanges between our governments," Iyer said. Ryan Holliway, Political-Military Officer from the Department of State said America's partnership with India is one of the most consequential relationships it has in the world. "We see this strategic partnership as a crucial pillar of a free and open IndoPacific and the 21st century," he said.

"In a general sense, our exchange of global and strategic issues has never been deeper or more sensitive than it is today, which is a testing out to the close partnership at all levels of our government," he added. The launch of the Initiative on Critical and Emerging Technology or iCET last year has the potential for a quantum leap in the U- India relationship, said Pradeep Mehta, secretary general of CUTS International, "It's a platform to accelerate our strategic conversions and policy alignment.

The initiatives under the ICET are substantially complimenting defence and security as the vital pivot of India's ties with the US and the success of it was evident during the midterm review held at the level of the Deputy national security advisors in early December of 2023. ... The scope has been expanded to cover many other sensitive areas," he said. "This shows and underscores the degree of cooperation and trust in the long way that we have come. I agree that the aim of India-US Technology Corporation is to harness talent, accelerate technology advancements, and broaden the innovation base through co-research and co-development, making a supply chain resilient with an overall intent to strengthen the multifaceted strategic partnership," he said. "It's an opportune moment for our relationship," Mehta said.

https://economictimes.indiatimes.com/news/defence/incredible-momentum-in-india-us-defence-relationship-says-pentagon-official/articleshow/108486312.cms?from=mdr

THE | DIPLOMAT
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Thu, 14 Mar 2024

Strategic Shifts: India's MIRV Milestone and Nuclear Policy Dynamics

In a pivotal moment for India's national security landscape, recent developments in the country's missile program signaled a significant leap in technological prowess. The successful testing of Multiple Independently Targetable Re-entry Vehicle (MIRV) technology on the Agni-V ballistic

missile has not only bolstered India's strategic capabilities but also raised questions about the potential impact on its nuclear doctrine.

This article delves into the different dimensions of India's MIRV advancements, exploring the technical aspects, strategic implications, and the interplay with India's established nuclear doctrine.

Recent Developments in India's Missile Program

India recently conducted a successful test of MIRV technology, using the Agni-V ballistic missile. While the Agni-V intercontinental ballistic missile (ICBM) was chosen as the test platform for this technology due to its long range (over 5,000 kilometers), in the future MIRVs can be installed on India's other ballistic missiles as well. Eligible candidates include the surface-launched Agni missile series and the submarine-launched K15 Sagarika and K4 missiles.

As per a former Defense Research and Development Organization (DRDO) scientist, the MIRV tested by India can carry three to four warheads inside the nose-cone of the missile. While the MIRV test would have been carried out with dummy warheads, India is now in a position to store and/or deploy ICBMs with multiple actual warheads.

Generally, any missile carries only a single warhead. MIRV technology enables a single missile to carry and launch multiple warheads over the target area. These multiple warheads can attack either a single target location or multiple target locations. This, in turn, reduces the number of missiles and launch facilities required for a given destruction level. With single-warhead missiles, one missile must be launched for each target. By contrast, with a MIRV warhead, a single ICBM can disperse multiple warheads on the target area.

The trade-off here is between weight and numbers – more warheads mean each individual warhead will have reduced weight. The smaller power of the warheads will have to be offset by increasing the accuracy of the system. Improved designs allow smaller warheads to achieve a given yield, while better electronics and guidance systems allow greater accuracy.

ICBMs carrying these warheads travel at hypersonic speeds and can potentially dodge ballistic missile defense (BMD) systems that are deployed to counter incoming enemy missiles. A MIRV-equipped missile can also be used to deploy fake or dummy warheads to distract the enemy's BMD systems. Thus, due to high velocity, low probability of detection and less time window to react, ballistic missiles, especially those equipped with MIRVs, are a very potent platform.

The technology being quite complicated and costly, only few nations have been able to make it on their own. This elite group includes: the United States, United Kingdom, France, Russia, China, and now India. Israel is suspected to possess or be in the process of developing MIRVs.

This capability boost is significant for two reasons. First, India has developed these technologies indigenously, joining an exclusive club. Second, MIRV technology will have implications for India's nuclear doctrine and the regional balance of power.

India's Nuclear Doctrine and MIRV Advancement

India's nuclear doctrine clearly states that:

1. India will maintain a credible minimum deterrent.

2. It will use nuclear weapons only in response to a nuclear first strike on Indian territory or Indian forces anywhere, and this retaliation will be massive; applicable in case of a biological or chemical attack.

Let's analyze the recent development of MIRV technology in the context of this doctrine.

MIRV capabilities enhance the efficiency of a nuclear arsenal, since it allows the attacker to overwhelm any conceivable BMD system without increasing the size of the attacker's own missile fleet. India's successful test potentially strengthens India's deterrent posture, and thus changes the strategic balance.

Previously, any increase in missile fleet by the enemy could be countered by a similar increase in BMD interceptors. With MIRVs, to counter a single incoming enemy missile, multiple interceptors would have to be built, meaning that it is much less expensive to increase offensive versus defensive capability. Thus the cost-exchange ratio is so heavily biased toward the attacker that the concept of mutually assured destruction would now have to be re-factored in India's strategic planning.

While India maintains a NFU policy, MIRV technology introduces a nuanced dimension. The ability to deploy multiple warheads may provide more flexibility in responding to a nuclear attack, thus increasing the retaliatory nature of India's nuclear strategy. Likewise, an adversary would have to rethink its decision of using a chemical and/or biological weapon to attack Indian forces and/or territory.

Also, the breakthrough creates space for revisiting India's nuclear doctrine and the very existence of the NFU policy. Previously on some occasions, Indian politicians have made statements regarding the same – at that time, however, the capability to support the rhetoric did not exist. Now it's a reality. From a deterrence perspective, MIRVs can thus increase the urge of a nuclear first strike – a country may opt to attack its adversary by MIRVs equipped with nuclear warheads and obliterate the enemy totally.

India's current nuclear doctrine emphasizes massive retaliation in response to a nuclear first strike. MIRV technology aligns with this objective. If MIRVs strike a single location or area, complete destruction of the target is guaranteed. If it rains down on multiple targets at the same time or at different times, it can have a cascading effect on the enemy's counter-attack capabilities. Moreover, MIRVs increase the threats to counter-force as well as counter-value targeting.

India possessing the MIRV technology has certainly raised the bar, and Pakistan and China would now be compelled to improve their ballistic missile defenses. China is known to have MIRVs as well as a good BMD program. Pakistan has also claimed to possess MIRV technology; however, whether Pakistan has a well-developed BMD program is not yet known well in the public domain.

Installing MIRVs on Indian ballistic missiles will also require more nuclear warheads to be produced. Since jet aircrafts cannot carry a ballistic missile, naturally these would be installed either on surface-launched or submarine-launched ballistic missiles. Open source data says that Pakistan and China have more nuclear warheads than India. Thus, India will have to develop more warheads to realize the full potential of the MIRV tech it has developed.

On the flip side, in an actual war scenario, finding out and eliminating Indian missiles equipped with MIRVs would be a high priority task for India's enemies.

Command and Control Issues

The civilian political leadership, through the Nuclear Command Authority (NCA), retains exclusive authorization for nuclear weapon use. The successful MIRV test may prompt a reassessment of the NCA's decision-making processes and the role of technological advancements in shaping those decisions. The fact that the prime minister himself chose to inform the nation about this test highlights its significance for the national strategic community.

But this test has once again brought to fore a point previously highlighted by some scholars regarding the command and control of India's nuclear assets: How will the command chain be impacted when India has fully deployed submarine launched ballistic missiles (SLBMs)? SLBMs cannot be put inside the submarine in a de-mated form; they will be there always in a ready-to-fire posture.

In a worst case scenario, would the government delegate some authority to the submarine crew to make their own decisions, or would they stick to the officially stated doctrine? How would the command and control chain function when a single missile inside the submarine will have multiple nuclear warheads?

That is something the Indian leadership now needs to think about. This new development will have to be factored into any future amendment that happens in the Indian nuclear doctrine, whether publicly announced, or otherwise.

Conclusion

In conclusion, India's successful testing of MIRV technology not only signifies a remarkable technological feat but also introduces complexities that demand careful consideration within the context of its existing nuclear doctrine. The integration of MIRV capabilities into India's missile program enhances its strategic flexibility, providing new dimensions to its deterrent posture.

While affirming its commitment to global disarmament, India must navigate the delicate balance between technological advancements, regional power dynamics, and international perceptions. As the nation stands at the forefront of MIRV-capable nations, the road ahead calls for strategic foresight, diplomatic acumen, and a steadfast commitment to maintaining a stable and secure global order.

https://thediplomat.com/2024/03/strategic-shifts-indias-mirv-milestone-and-nuclear-policy-dynamics/

THE ECONOMIC TIMES

Thu, 14 Mar 2024

India, Brazil hold first '2+2' Defence and Foreign Ministerial Dialogue

India and Brazil on Thursday explored ways to expand cooperation in areas of energy, critical minerals, technology and counter-terrorism at their first '2+2' defence and foreign ministerial

dialogue. External affairs ministry spokesperson Randhir Jaiswal said the talks spanned various key areas of cooperation. "Discussions spanned defence, space, energy, critical minerals, tech, counterterrorism and regional, multilateral & other issues of mutual interest," he said on 'X'. The dialogue took place in Delhi.

It was co-chaired by additional secretary in the external affairs ministry G V Srinivas and joint secretary in the defence ministry Vishwesh Negi. The Brazilian delegation was led by Director at Brazilian foreign ministry Marcelo Camara and Rear Admiral Fernando de Luca Marques de Oliviera.

https://economictimes.indiatimes.com/news/defence/india-brazil-hold-first-22-defence-and-foreign-ministerial-dialogue/articleshow/108501306.cms?from=mdr

अमर उजाला

Thu, 14 Mar 2024

India-Brazil: भारत-ब्राजील के बीच पहला टू प्लस टू रक्षा और विदेश मंत्रिस्तरीय डायलॉग, कई मुद्दों पर हुई चर्चा

भारत और ब्राजील के बीच पहला टू प्लस टू रक्षा और विदेश मंत्रिस्तरीय डायलॉग आयोजित किया गया। इस दौरान ऊर्जा, महत्वपूर्ण खनिज, प्रौद्योगिकी और आतंकवाद को रोकने समेत कई क्षेत्रों में सहयोग बढ़ाने के तरीकों पर खुलकर चर्चा हुई।

कई मुद्दों पर दोनों देशों के बीच हुई चर्चा- रणधीर जयसवाल

विदेश मंत्रालय के प्रवक्ता रणधीर जयसवाल ने कहा कि मंत्रिस्तरीय डायलॉग के दौरान कई प्रमुख क्षेत्रों पर चर्चा हुई। सोशल मीडिया एक्स पर पोस्ट साझा करते हुए उन्होंने कहा कि रक्षा, अंतरिक्ष, ऊर्जा, तकनीक, आतंकवाद के रोकने समेत कई मुद्दों पर चर्चा की गई। गौरतलब है कि यह मंत्रिस्तरीय डायलॉग दिल्ली में आयोजित किया गया।

इसकी सह अध्यक्षता विदेश मंत्रालय में अतिरिक्त सचिव जीवी श्रीनिवास और रक्षा मंत्रालय में संयुक्त सचिव विश्वेश नेगी ने की। वहीं ब्राजीलियाई प्रतिनिधिमंडल का नेतृत्व ब्राजील के विदेश मंत्रालय के निदेशक मार्सेलो कैमारा और रियर एडमिरल फर्नांडो डी लुका मार्केस डी ओलिविएरा ने किया।

https://www.amarujala.com/india-news/india-brazil-hold-first-2-2-defence-and-foreign-ministerial-dialogue-2024-03-14?pageId=1

ThePrint

Fri, 13 Mar 2024

India's Africa push — Defence Pact with Ethiopia in Final Stages

India and Ethiopia are in the final stages of clinching a defence cooperation agreement that will see New Delhi help the African nation with military training and credit lines to shore up defences, ThePrint has learnt. Demeke Atnafu, the ambassador of Ethiopia to India, told ThePrint on the sidelines of a conference organised by the Observer Research Foundation that the agreement is likely to be signed only after the general elections in India.

While this will be the maiden agreement, India and Ethiopia have had a history of cooperation in defence since the 1950s. It was reinforced in 2023 when Prime Minister Narendra Modi and Prime Minister Abiy Ahmed of Ethiopia agreed to deepen relations and expand bilateral cooperation in areas, including defence, in a meeting during BRICS in Johannesburg.

In October 2022, the Ethiopian defence minister Abraham Belay attended the India-Africa Defence Dialogue held on the sidelines of DefExpo in October 2022 in Gandhinagar. During the visit, Belay also held a meeting with his Indian counterpart, Rajnath Singh, and discussed bilateral defence co-operation.

This is part of India's strong push for defence cooperation in Africa. India has been wooing Africa for quite a few years now and has already made inroads into the continent with sale of certain air defence systems, small arms, anti-drone technology, firing range simulators, among others. As reported earlier, India has extended a line of credit touching nearly $14 billion to 42 nations in the African Union and is looking at increasing the funds to support the defence capacity of countries in the region, besides traditional sectors like railways, ports and roads.

In the 1950s, India played a central role in the establishment of the Harar Military Academy in Ethiopia. The then Emperor of Ethiopia, Haile Selassie had requested India to assist in the establishment of the academy after a visit to the National Defence Academy (NDA) in Khadakwasla, Pune in 1956. Brigadier N.C. Rawlley prepared a study for the Ethiopian government on the academy project. Rawlley was appointed the first Commandant of the Harar Military Academy. The second and third Commandants of the military academy were also from India, according to the Indian Ministry of External Affairs.

India also sent a nine-member Indian Army training team in 2009 to the Major General Hayelom Araya Military Academy at Holleta, Ethiopia, for a three-year assignment. Sources in the defence establishment said that the cooperation with the African country will involve multiple training programmes and also help with a credit line for capacity building. It is not just India that is focusing on Africa. China has also been focusing on deepening its own defence cooperation with Africa. According to Boston University's Global Development Centre, the nation has, between 2000 and 2020, publicly signed 27 loan deals with eight African countries worth about $3.5 billion for defence spending.

Cooperation in UPI, digital technologies and business

Speaking at a discussion hosted by thinktank Observer Research Foundation on Tuesday, Atnafu said New Delhi and Addis Ababa were also working on an agreement to work together on the Unified Payments Interface (UPI).

In November 2023, during the sixth India-Ethiopia Joint Trade Committee held in Addis Ababa, India had invited collaboration between UPI and the Ethiopian national payments system EthSwitch. "We are looking to India as a partner for contributing to Digital Ethiopia 2025 — our plan to transform the digital infrastructure of the country," said Atnafu in response to a question from ThePrint.

He added: "Our national digital identity card programme is already being built by a company from Bengaluru." In February 2022, the Ethiopian National Identity Program rolled out the enrollment process for its digital identity card — Fayda ID, according to Abren, a Washington-based Ethiopian think-tank.

Fayda, is a 12-digit unique identification number, leveraging the Modular Open-Source Identity Platform (MOSIP), incubated at the International Institute of Informational Technology (IIIT) Bangalore. Atnafu also pointed out that business ties between India and Ethiopia, amounting to roughly $2.8 billion annually, were poised for a boost. He highlighted that over the past six months, five different business delegations from India, covering sectors such as IT, ICTs and pharmaceuticals, have visited the country.

https://theprint.in/defence/indias-africa-push-defence-pact-with-ethiopia-in-final-stages/1998983/

नवभारत टाइम्स

Thu, 14 Mar 2024

श्रीलंका, पाकिस्तान, म्यांमार... भारत के चारों ओर मिलिट्री बेस बनाने की तैयारी में चीन, अमेरिकी खुफिया रिपोर्ट में खुलासा

भारत के खिलाफ खतरनाक मंसूबे रखने वाला चीन अब हिंदुस्तान के चारों ओर मौजूद पड़ोसी देशों में सैन्य अड्डा बनाने की तैयारी में है। अमेरिका के इंटेलिजेंस कम्युनिटी की ताजा रिपोर्ट में खुलासा हुआ है कि चीन श्रीलंका, पाकिस्तान, म्यांमार जैसे भारत के पड़ोसी देशों के अलावा क्यूबा, मित्र राष्ट्र यूएई, सेशेल्स, ताजिकिस्तान और तंजानिया भी मिलिट्री बेस बनाने की संभावना पर काम कर रहा है। चीन के इस कदम का मकसद अपनी ताकत का प्रदर्शन करना है और अपने राष्ट्रीय हितों की सुरक्षा करना है। अमेरिकी खुफिया रिपोर्ट के खुलासे से भारत के लिए टेंशन बढ़ गई है जो हिमालय में पहले ही चीन के खतरे से जूझ रहा है।

भारत ने हाल ही में चीन की सीमा पर 10 हजार अतिरिक्त सैनिकों की तैनाती की है। अब दोनों देशों की ओर से करीब 60-60 हजार सैनिक आमने-सामने हैं। यही नहीं चीन की कोशिश है कि अमेरिका को

चेतावनी दी जाए और इसी वजह से क्यूबा और अफ्रीका के पश्चिमी तट पर मौजूद देश इक्वटोरियल गिनी में सैन्य अड्डा बनाने की संभावना पर काम कर रहा है।

अफ्रीका के ठीक दूसरी ओर अमेरिका है और इसी वजह से चीन की नजर इस देश पर है। इससे पहले चीन ने अफ्रीका के पूर्वी तट पर जिबूती में नेवल बेस बनाया था। यहां बड़ी तादाद में सैनिक मौजूद हैं।

चीन के राष्ट्रपति का खतरनाक है सैन्य प्लान

अमेरिकी इंटेलिजेंस कम्युनिटी ने अपने वार्षिक आकलन में यह जानकारी दी है। उन्होंने कहा कि चीन ने जिबूती के अलावा कंबोडिया में भी नेवल बेस बना लिया है। अब वह अन्य जगहों जैसे म्यांमार, क्यूबा, श्रीलंका, पाकिस्तान, सेशेल्स, ताजिकिस्तान, तंजानिया और यूएई में भी सैन्य अड्डा बनाने की ताक में है।

चीन का इरादा साल 2035 तक पूरी सेना को आधुनिक बनाने का है और पीएलए को साल 2049 तक वर्ल्ड क्लास मिलिट्री बनाने की है। रिपोर्ट में कहा गया है कि अमेरिका बहुत अस्थिर दुनिया का सामना कर रहा है। इसमें वैश्विक ताकतों के बीच तनाव चल रहा है और कई देशों के बीच चुनौतियां हैं और क्षेत्रीय संघर्ष चल रहे हैं।

रिपोर्ट में कहा गया है कि चीन, ईरान और रूस वर्तमान अंतरराष्ट्रीय व्यवस्था को चुनौती दे रहे हैं। चीन का यह कदम शी जिनपिंग के सेना को बदलने के प्लान का हिस्सा है जो पीएलए को ब्लू वॉटर नेवी बनाना चाहते हैं ताकि वह दुनियाभर में अपने अभियान को चला सके।

चीन ने अभी केवल जिबूती में अपने विदेशी नेवल बेस को स्वीकार किया है। वहीं चीन ने इस कदम को सही ठहराया है और कहा है कि उनका सामान दुनिया के हर हिस्से में जाता है। चीन के लोग भी वहां जाते हैं। इसलिए ऐसी क्षमता को विकसित करना पूरी तरह से न्यायोचित है। चीन ने कहा कि अमेरिका के सैकड़ों मिलिट्री बेस दुनियाभर में हैं और उसने हजारों सैनिक तैनात कर रखे हैं।

https://navbharattimes.indiatimes.com/world/america/pakistan-sri-lanka-myanmar-china-seeks-overseas-military-base-in-india-neighbouring-country-says-us-report/articleshow/108491379.cms

नवभारत टाइम्स

Thu, 14 Mar 2024

पाकिस्तान को महाविनाशक हथियार बनाने में मदद दे रहा चीन? भारत ने खोली पोल, पाकिस्तानी भी भौचक्का

एक्यू खान परमाणु हथियार तस्करी नेटवर्क के लिए कुख्यात पाकिस्तान एक बार फिर से दुनिया में चर्चा का विषय बन गया है। गत 23 जनवरी को भारत के कस्टम अधिकारियों ने माल्टा के झंडे वाले व्यापारिक जहाज को कंप्यूटर न्यूमेरिकल कंट्रोल मशीन के साथ पकड़ा। यह बेहद अहम मशीन चीन से पाकिस्तान भेजी जा रही थी। इस मशीन को चीन से कराची बंदरगाह भेजा जा रहा था।

इस जहाज को मुंबई के न्हवा शेवा पोर्ट पर रोका गया। इस मशीन का इस्तेमाल दोहरे तरीके से किया जा सकता है। विशेषज्ञों का कहना है कि इस अत्याधुनिक मशीन का इस्तेमाल पाकिस्तान अपने मिसाइल

और परमाणु हथियार कार्यक्रम में करने के लिए मंगा रहा था। इस खुलासे पर दुनिया के साथ-साथ खुद पाकिस्तानी भी भौचक्का हैं।

इस खुलासे के बाद पाकिस्तानी पत्रकार और विश्लेषक वजाहत सईद खान ने इन सीएनसी मशीनों को पकड़े जाने पर हैरानी जताई। उन्होंने माना कि ऐसा पहली बार नहीं हुआ है जब पाकिस्तान जाने वाले जहाज में चीन से परमाणु इस्तेमाल वाले उपकरण मिले हैं। डीआरडीओ के वैज्ञानिकों के मुताबिक इस सीएनसी मशीन को इटली की कंपनी ने बनाया था और इसके पाकिस्तान के परमाणु कार्यक्रम में इस्तेमाल की आशंका है।

अब इस पूरे मामले की मीडिया ने जांच की तो खुलासा हुआ है कि यह चीन से भेजी गई थी और इसे पाकिस्तान के कॉसमोस इंजीनियरिंग कंपनी को भेजा जा रहा था जो पाकिस्तानी सेना को हथियारों और अन्य प्रॉडक्ट की सप्लाई करती है। कॉसमोस इंजीनियरिंग की खुद पाकिस्तान में ही पिछले दो साल से जांच चल रही है। परमाणु अप्रसार से जुड़े विशेषज्ञों का कहना है कि इस तरह की सीएनसी मशीन का इस्तेमाल नागरिक और सैन्य दोनों ही तरह की चीजों में किया जा सकता है।

चीन और पाकिस्तान में परमाणु मदद का पुराना इतिहास

सीएनसी मशीनों को साल 1996 से ही वैसनार अरेंजमेंट के तहत रखा गया है। वैसनार अरेंजमेंट एक वैश्विक एक्सपोर्ट कंट्रोल संस्थान है जो सैन्य और नागरिक दोनों के दोहरे इस्तेमाल वाले आइटम के प्रसार पर नजर रखता है। ऐसा माना जाता है कि उत्तर कोरिया भी इस तरह की सीएनसी मशीनों का इस्तेमाल कर रहा है जो उसने तस्करी के रास्ते मंगवाया है। भारत साल 2017 से ही वैसनार अरेंजमेंट का सदस्य है। भारत इसके अन्य सदस्य देशों के साथ पूरा सहयोग करता है। भारत के लिए चीन और पाकिस्तान के बीच इस तरह का सहयोग नया नहीं है लेकिन इस तरह के सामान को जब्त किए जाने की घटना पिछले कुछ समय से नहीं हुई थी।

विशेषज्ञों के मुताबिक यह इस बात का सबूत है कि चीन किस तरह से पाकिस्तान को परमाणु तकनीकों की सप्लाई करने में मदद कर रहा है। इससे पहले चीन ने ही पाकिस्तान को परमाणु बमों की डिजाइन दी थी जो आगे चलकर लीबिया तक पहुंच गए थे। चीन और उत्तर कोरिया ने ही पाकिस्तान को किलर मिसाइलों की तकनीक दी थी।

इसी तकनीक की मदद से पाकिस्तान ने कई मिसाइलें बनाई हैं। पाकिस्तान के परमाणु वैज्ञानिक एक्यू खान ने परमाणु बम की तकनीक को खाड़ी के कई देशों तक पहुंचा दिया था। पाकिस्तान का दावा है कि खान ने अकेले ही यह किया लेकिन उसकी बात पर किसी को भरोसा नहीं है।

पाकिस्तान की कैसे मदद कर रहा है चीन?

चीन और उत्तर कोरिया से मिसाइल तकनीक का पाकिस्तान पहुंचना भारत के लिए बड़ी चिंता की बात है। हाल ही में चीन का सीएनसी मशीन भेजना विशेषज्ञ असामान्य मान रहे हैं जो परमाणु अप्रसार संधि का सदस्य देश है। इससे साफ होता है कि चीन अपने किए वादों को पूरा नहीं करता है। विशेषज्ञों का कहना है कि भारत के लिए सबसे ज्यादा चिंता की बात यह है कि चीन उन तकनीकों को मुहैया करा रहा है जो पाकिस्तान के लिए यूरोप और अमेरिका में बैन है।

पाकिस्तान एक परमाणु हथियार संपन्न देश है और उसके पास भारत से ज्यादा एटम बम हैं। पाकिस्तान अपने परमाणु मिसाइल कार्यक्रम को बढ़ा रहा है जो भारत के लिए बहुत खतरनाक हो सकता है। इसमें चीन उसकी खुलकर मदद कर रहा है और मुंबई में पकड़ी गई सीएनसी मशीनें इसका उदाहरण है।

https://navbharattimes.indiatimes.com/world/pakistan/china-pakistan-wmd-nexus-after-india-intercepted-merchant-ship-carrying-cnc-machine-for-nuclear-program/articleshow/108481915.cms

Science & Technology News

the pioneer

Fri, 15 Mar 2024

Scientists play key role in a Nation's Progress

The public always looks at the scientific community whenever they are in dire straits. Farmers seek help from agriculture scientists when serious pests affect their crops, or there is a drastic decline in productivity. Similarly, the public looks to medical scientists for help whenever a pathogen attacks humans.

During the COVID-19 pandemic, we have seen how, every day, the ordinary person eagerly looked at research work from various labs. Covid-19 reinstated the common man's confidence in scientists. The current generation that has overcome the COVID-19 catastrophe is deeply indebted to scientists for their lives.

Even though there are hundreds of scientific fields, agriculture and health care are close to the day-to-day affairs of ordinary people, and hence, scientists working in these areas need to communicate directly to the public. Scientists working in other fields like communication engineering, space research, civil engineering etc, though highly relevant to the day-to-day life of commoners, never come in direct contact with them. Whenever humanity is in disarray, scientists bring glee and a ray of hope through their discoveries.

In many parts of the world, scientists also create confusion because of conflicts of interest and interference from policymakers. It's an open secret that most of the food products available in our market are adulterated, and in some cases, they contain toxic substances. Even scientists working in industries will secretly admit it, but they are not allowed to publish the results or speak publicly.

Most of the scientific work related to pesticides, drugs etc is linked with industry, and none of the industries will support a genuine scientist. Industries may influence the design of research studies to ensure outcomes align with their objectives.

There is always a conflict between proponents of modern medicine and traditional systems of medicine. Many scientists blatantly state that Ayurvedic or Homeopathic drugs have side effects, forgetting the fact that all modern medicines have severe side effects. Scientists should strive to be impartial in pursuing knowledge and understanding of the natural world. This dedication to objectivity is fundamental to the scientific method, which relies on systematic observation, experimentation, and analysis to uncover truths about the universe. However, scientists, like all humans, are susceptible to personal beliefs and biases that may subtly influence their work.

These biases can affect everything from the questions scientists choose to investigate to the interpretation of their findings. Furthermore, external factors such as funding sources, societal pressures, and political climates can also influence scientific research. Research funding, in particular, plays a significant role in shaping the scientific agenda, as scientists often rely on grants from government agencies, private foundations, or industry sponsors to support their work.

The priorities of these funding sources may align with particular agendas or interests, potentially influencing the direction and focus of research. Societal pressures and political influence can also distort scientific results.

Despite these challenges, the scientific community is committed to upholding certain principles of objectivity, transparency, and peer review to ensure the integrity of scientific research.

While scientists may not always be entirely free from bias, these principles help to minimise the impact of personal beliefs and external influences on the scientific process. The scientific community can maintain public trust and credibility by upholding these standards. Moreover, scientists should proactively engage with societal concerns, prioritising research that tackles urgent issues like public health, and social inequality. If scientists lose public trust, society will be in disarray.

https://www.dailypioneer.com/2024/columnists/scientists-play-key-role-in-a-nation---s-progress.html

THE ECONOMIC TIMES

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What's Pi Day all about? Math, Science, Pies and more

Math enthusiasts around the world, from college kids to rocket scientists, celebrate Pi Day on Thursday, which is March 14 or 3/14 - the first three digits of an infinite number with many practical uses. Around the world many people will mark the day with a slice of pie - sweet, savory or even pizza. Simply put, Pi is a mathematical constant that expresses the ratio of a circle's circumference to its diameter. It is part of many formulas used in physics, astronomy, engineering and other fields, dating back thousands of years to ancient Egypt, Babylon and China.

Pi Day itself dates to 1988, when physicist Larry Shaw began celebrations at the Exploratorium science museum in San Francisco. The holiday didn't really gain national recognition though until two decades later. In 2009, Congress designated every March 14 to be the big day - to hopefully

spur more interest in math and science. Fittingly enough, the day is also Albert Einstein's birthday. Here's a little more about the holiday's origin and how it's celebrated today.

WHAT IS PI?

Pi can calculate the circumference of a circle by measuring the diameter - the distance straight across the circle's middle - and multiplying that by the 3.14- plus number. It is considered a constant number and it is also infinite, meaning it is mathematically irrational. Long before computers, historic scientists such as Isaac Newton spent many hours calculating decimal places by hand. Today, using sophisticated computers, researchers have come up with trillions of digits for pi, but there is no end.

WHY IS IT CALLED PI?

It wasn't given its name until 1706, when Welsh mathematician William Jones began using the Greek symbol for the number. Why thatletter? It's the first Greek letter in the words "periphery" and "perimeter," and pi is the ratio of a circle's periphery - or circumference - to its diameter.

WHAT ARE SOME PRACTICAL USES?

The number is key to accurately pointing an antenna toward a satellite. It helps figure out everything from the size of a massive cylinder needed in refinery equipment to the size of paper rolls used in printers. Pi is also useful in determining the necessary scale of a tank that serves heating and air conditioning systems in buildings of various sizes.

NASA uses pi on a daily basis. It's key to calculating orbits, the positions of planets and other celestial bodies, elements of rocket propulsion, spacecraft communication and even the correct deployment of parachutes when a vehicle splashes down on Earth or lands on Mars. Using just nine digits of pi, scientists say it can calculate the Earth's circumference so accurately it only errs by about a quarter of an inch (0.6 centimeters) for every 25,000 miles (about 40,000 kilometers).

IT'S NOT JUST MATH, THOUGH

Every year the San Francisco museum that coined the holiday organizes events, including a parade around a circular plaque, called the Pi Shrine, 3.14 times - and then, of course, festivities with lots of pie. Around the country, many events now take place on college campuses. For example, Nova Southeastern University in Florida will hold a series of activities, including a game called "Mental Math Bingo" and event with free pizza (pies) - and for dessert, the requisite pie.

"Every year Pi Day provides us with a way to celebrate math, have some fun and recognize how important math is in all our lives," said Jason Gershman, chair of NSU's math department. At Michele's Pies in Norwalk, Connecticut, manager Stephen Jarrett said it's one of their biggest days of the year. "We have hundreds of pies going out for orders (Thursday) to companies, schools and just individuals," Jarrett said in an interview. "Pi Day is such a fun, silly holiday because it's a mathematical number that people love to turn into something fun and something delicious.

So people celebrate Pi Day with sweet pies, savory pies, and it's just an excuse for a little treat." NASA has its annual "Pi Day Challenge" online, offering people plenty of games and puzzles, some of them directly from the space agency's own playbook such as calculating the orbit of an asteroid or the distance a moon rover would need to travel each day to survey a certain lunar area.

WHAT ABOUT EINSTEIN?

Possibly the world's best-known scientist, Einstein was born on March 14, 1879, in Germany. The infinite number of Pi was used in many of his breakthrough theories and now Pi Day gives the world another reason to celebrate his achievements. In a bit of math symmetry, famed physicist Stephen Hawking died on March 14, 2018, at age 76. Still, Pi is not a perfect number. He once had this to say: "One of the basic rules of the universe is that nothing is perfect. Perfection simply doesn't exist. Without imperfection, neither you nor I would exist."

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