

Thu, 02 Mar, 2017



OFF THE LAUNCHPAD

The target missile used by the DRDO in the successful test-firing of the Advanced Area Defence Endo-Atmospheric Interceptor Missile at Abdul Kalam Island in Odisha on Wednesday. *PTI*

THE HINDU

Thu, 02 Mar, 2017

Interceptor missile test successful

It can tackle missiles at a range of 15 km to 30 km

The Defence Research and Development Organisation (DRDO) on Wednesday successfully carried out a test of an interceptor missile, further validating the reliability of the under-development, two-layered Ballistic Missile Defence (BMD) in shooting down enemy missiles. Defence sources said the endo-atmospheric missile, which can intercept missiles at ranges of 15-30 km, was launched at 10.15 a.m. from the Abdul Kalam Island off the Odisha coast in response to an incoming 'enemy' missile which was launched from the Integrated Test Range (ITR) in Chandipur.

The missile intercepted the incoming missile at an altitude of 15 km scoring a direct hit, a source said.

Last month, the DRDO carried out a successful test of the exo-atmospheric interceptor missile destroying the target outside the earth's atmosphere at an altitude of over 85 km.

Research Centre Imarat (RCI) of the DRDO which had played a role in the development of all strategic missiles has spearheaded the BMD programme.

Two missiles - The BMD consists of two interceptor missiles, the Prithvi Defence Vehicle (PDV) for exo-atmospheric ranges and the Advanced Area Defence (AAD) missile for endo-atmosphere or lower altitudes.

The BMD is critical to protect the country from the long-range ballistic missiles proliferating in the neighbourhood. DRDO expects to have shield ready for deployment by 2022.



Thu, 02 Mar, 2017

Interceptor missile hits test target

India tested a low-altitude interceptor missile to destroy an incoming ballistic missile over the Bay of Bengal on Wednesday, inching closer to putting together a two-tier ballistic missile defence system.

DRDO had tested a highaltitude interceptor missile on February 11. While that test involved the “exo-atmospheric” (outside atmosphere) interceptor missile hitting the target at an altitude of 97km, Wednesday's test was against a missile at 15km altitude.



Thu, 02 Mar, 2017

Desi Star Wars shield comes another step closer to reality

DRDO Successfully Tests Low-Altitude Interceptor Missile

In yet another step towards an operational two-tier ballistic missile defence (BMD) system, India tested on Wednesday a lowaltitude interceptor missile to destroy an incoming ballistic missile over the Bay of Bengal.

The DRDO had tested a high-altitude interceptor missile on February 11 as part of the experimental BMD system, which is designed to track and destroy ballistic missiles both inside (endo) and outside (exo) the earth's atmosphere for a higher “kill” probability .



DEFENCE BOOST: The interceptor missile (left) fired from the Abdul Kalam Island off Odisha coast 'successfully destroyed' the incoming 'enemy' Prithvi missile, defence officials said on Wednesday

While last month's test involved the “exo-atmospheric” interceptor missile hitting the target at an altitude of 97 km, the test-firing on Wednesday was against an incoming missile at 15km altitude.

Defence officials said the interceptor missile fired from the Abdul Kalam Island (Wheeler Island) off Odisha coast “successfully destroyed” the incoming “ene my” Prithvi missile, which was launched from the integrated test range at Chandipur, at 10.15 am. “All the mission objectives were successfully met. The weapon system radars tracked the target and provided the initial guidance to the interceptor, which could precisely home in on the target and

destroyed it in the endo-atmospheric layer. The complete event, including the engagement and destruction, was tracked by a number of electro-optical tracking systems using infrared imagery . Radars and telemetry stations tracked the target and the interceptor till the destruction of the target,” the defence ministry said in a statement.

The long-delayed BMD system, which needs an overlapping network of earlywarning and tracking sensors, reliable command and control posts, land and seabased batteries of advanced interceptor missiles, will take at least two years to be ready for deployment to protect a city or strategic installation.



Thu, 02 Mar, 2017

India Test-Fires Indigenous Supersonic Interceptor Missile

India on Wednesday successfully test-fired an indigenously developed supersonic interceptor missile capable of destroying any incoming enemy missile at low altitude, a feat which reflects the country's Ballistic Missile Defence prowess.

The Defence Ministry said all the mission objectives were successfully met during the test-firing of the endo-atmospheric missile from Abdul Kalam Island in Odisha.

This the second time that the missile has been test-fired in less than a month and is part of an effort to put in place a multi-layer missile defence system.

"The endo-atmospheric missile, capable of intercepting incoming targets at an altitude of 15 to 25 km successfully destroyed the incoming missile. All the mission objectives were successfully met," the Defence Ministry said.

Defence Minister Manohar Parrikar congratulated DRDO on the successful launch.

"The launch has proved the Ballistic Missile Defence (BMD) prowess of the country," the Ministry said.

THE ASIAN AGE

Thu, 02 Mar, 2017

Homegrown supersonic interceptor missile test-fired in Odisha

This is the second time that the missile has been test-fired in a month and is part of an effort to put in place a missile defence system.

Balasore: India on Wednesday successfully test-fired its indigenously developed supersonic interceptor missile capable of destroying any incoming enemy ballistic missile at low altitude.

This is the second time that the missile has been test-fired in less than a month and is part of an effort to put in place a multi-layer missile defence system.

"Today's test launch was conducted in order to validate various parameters of the interceptor in flight mode," a defence official said, adding that it was a low altitude trial.

The interceptor was engaged against a target which was a Prithvi missile launched from launch complex 3 of the Integrated Test Range (ITR) at Chandipur near Balasore, taking up the trajectory of a hostile ballistic missile.

The target missile was launched at about 10:10 am from Chandipur.

After about four minutes the interceptor, Advanced Air Defence (AAD) missile positioned at Abdul Kalam Island in the Bay of Bengal, getting signals from tracking radars, roared through its trajectory to destroy the incoming hostile missile in mid-air, in an endo-atmospheric altitude, the official said.

"The mission was excellent and it was a direct hit," said a scientist of the Defence Research Development Organisation (DRDO).

The interceptor is a 7.5-meter long single stage solid rocket propelled guided missile equipped with a navigation system, a hi-tech computer and an electro-mechanical activator, the official said.

The interceptor missile had its own mobile launcher, secure data link for interception, independent tracking and homing capabilities and sophisticated radars, the official added.

On February 11, an incoming hostile ballistic missile target was successfully intercepted at high altitude, above 50 km of the earth's atmosphere by an exo-atmospheric interceptor missile off the Odisha coast.

Earlier, a low altitude (endo-atmospheric) test of AAD missile was successfully test launched on May 15, 2016 from the same base.



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DRDO's 7.5-meter long single stage solid rocket successfully test fired

The interceptor was engaged against a target which was a Prithvi missile launched from launch complex 3 of the Integrated Test Range (ITR) at Chandipur near here, taking up the trajectory of a hostile ballistic missile. The target missile was launched at about 10.10 hours from Chandipur.

New Delhi :

Defence Research and Development Organisation successfully test-fires indigenously developed supersonic Interceptor Missile from Abdul Kalam Island off Odisha coast.

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दूसरी बार इंटरसेप्टर मिसाइल का परीक्षण

पाकिस्तान की गौरी मिसाइल को मार गिराने में सक्षम

जासं, बालासोर : रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने बुधवार को देसी तकनीकी से बनी दो इंटरसेप्टर मिसाइलों का सफल परीक्षण सुबह 10.10 से 10.15 बजे के बीच अब्दुल कलाम आइलैंड और चांदीपुर परीक्षण रेंज में किया। ये दोनों इंटरसेप्टर मिसाइल किसी भी बैलिस्टिक मिसाइल को नष्ट करने की क्षमता रखते हैं। बहुस्तरीय बैलिस्टिक मिसाइल रक्षा तंत्र को विकसित किए जाने की दिशा में इस मिसाइल का निर्माण किया गया है। एक माह के अंदर ही दूसरी बार मिसाइल का परीक्षण किया गया है।

यह मिसाइल करीब 30 किलोमीटर ऊंचाई के लिए बनाई गई है। यह सात मीटर लंबे रॉकेट से दागी जाने वाली मिसाइल है। इंटरसेप्टर मिसाइल एक ऐसी प्रणाली है, जिसके माध्यम से अपनी ओर आ रही बैलिस्टिक मिसाइल को हवा में नष्ट किया जा सकता है। बुधवार को परीक्षण से पहले जमीन से जमीन पर मार करनेवाली पृथ्वी मिसाइल को चांदीपुर में बतौर निशाना रखा गया था। इसके बाद समुद्र में 70 किलोमीटर दूर अब्दुल कलाम आइलैंड (व्हीलर द्वीप)



बालासोर : ओडिशा में बुधवार को अब्दुल कलाम आइलैंड पर इंटरसेप्टर मिसाइल का सफल परीक्षण किया गया। प्रेट्र

पर रखे गए इंटरसेप्टर मिसाइल ने पृथ्वी के छोड़े जाने के कुछ पलों बाद ही रडार से सिग्नल को कैच कर लिया और समुद्र के ऊपर कुछ ऊंचाई पर हवा में पृथ्वी मिसाइल को नष्ट कर दिया। इंटरसेप्टर मिसाइल पाकिस्तान की गौरी मिसाइल को हवा में ही मार गिराने की क्षमता रखती है।

पृथ्वी और गौरी मिसाइल की मारक क्षमता करीब-करीब समान मानी जाती है। बुधवार को इंटरसेप्टर मिसाइल के परीक्षण के मौके पर रक्षा अनुसंधान व विकास संगठन (डीआरडीओ) तथा इंटीग्रेटेड टेस्ट रेंज (आइटीआर) से जुड़े वरिष्ठ वैज्ञानिक व अधिकारियों का दल मौजूद था।

Thu, 02 Mar, 2017

DRDO radar that can spot Pak's weapons is ready

The Defence Research and development Organisation will hand over indigenous weapon-location radar to the Army Thursday. Bharat Electronics Ltd. will then produce the DRDO-developed WLR under a technology transfer pact. In the 1999 Kargil War, the Indian Army lacked such weapon-locating radar, which the Pakistani Army had. "The WLR detects and locates the weapon.. within seconds before the round land, enabling quick, accurate counter-artillery return fire," a person familiar with the matter told this newspaper.



Thu, 02 Mar, 2017

DRDO inks deal to make key alloy

'Non-exclusive' licencing deal for armour applications

The Defence Research and Development Organisation (DRDO) on Wednesday signed a technology transfer agreement with Jindal Stainless (Hisar) Limited (JSHL) for manufacturing High Nitrogen Steel (HNS). The alloy has significant applications in the defence sector, but currently the country is largely dependent on imports.

The "non-exclusive" licencing agreement for armour applications was signed between the Defence Metallurgical Research Laboratory (DMRL), the Hyderabad-based laboratory of the DRDO and the JSHL.

Officials said HNS steel, which has a much higher ballistic strength than normal steel, will free the country of imports.

"HNS is not only tough but also has good strength. In addition to being non-magnetic and corrosion-resistant, the HNS cost is about 40% less compared to Rolled Homogenous Armour Steel (RHA)," DRDO said in a statement.

Better materials - Dr. Subhash Bhamre, Minister of State for Defence, noted that the HNS technology would further the Army's quest for lighter and high-performance armouring material compared to materials currently in use. The JSHL said in a statement that HNS had passed multiple levels of ballistic tests in different calibres, with 8-10 times higher impact/blast protection. "We are looking at production of 15,000 to 20,000 tonnes of HNS per annum initially, which will be increased gradually. It will be priced 30-40% cheaper than the imported material," Mr. Abhyuday Jindal, Vice-Chairman JSHL, said.

HNS, by virtue of its strength and characteristics, has potential application in all armoured vehicles, and the JSHL has several upcoming programmes, including the Infantry Combat Vehicle (ICV), Light Specialty Vehicle (LSV) and such others.

Business Standard

Thu, 02 Mar, 2017

Make in India: Jindal Stainless (Hisar) forays into defence

By Jyoti Mukul

Becomes the first company in India to commercially produce high nitrogen steel

Jindal Stainless (Hisar) Limited, country's largest integrated stainless steel producer, on Wednesday announced its entry into the defence sector by signing the license agreement with Defence Research & Development Organisation (DRDO) for manufacturing high nitrogen steel (HNS) for armour applications.

With this, Jindal Stainless becomes India's first company to commercially manufacture high nitrogen steel for the defence sector under the transfer of technology from DRDO. The use of HNS will replace the existing

import of Rolled Homogenous Armour (RHA), thereby resulting in improved cost efficiency in material acquisition for armour applications by 50 per cent, the company said in a statement.

The company is a comprehensive joint effort, and almost a decade of research and development by JSHL and Defence Metallurgical Research Laboratory (DMRL) to develop HNS. This major development will not only accelerate the indigenization process of Indian defence arsenal in line with government's 'Make in India' drive but will also help in easy availability of best material for manufacturing lighter armour vehicles, as import procurement often delays the manufacturing process.

High Nitrogen Steel is corrosion resistant and provides exceptional ballistic/blast protection than the existing material at a much reduced thickness along with longevity which increases the fuel and mass efficiency. HNS exhibits higher energy absorption level, enhances crashworthiness to the entire artillery system and has significantly higher impact values (> 200 Joules at room temperature and > 150 Joules at -40C) as compared to RHA which make HNS a far superior material for blast protection. HNS has passed multiple levels of ballistic tests in different calibers with 8-10 times higher impact/blast protection.

HNS has potential application in all armoured vehicles including Infantry Combat Vehicle (ICV), Light Specialty Vehicle (LSV), Light Armoured Multipurpose Vehicle (LAMV), Futuristic Infantry Combat Vehicle (FICV), Main Battle Tank (MBT), Future Ready Combat Vehicle (FRCV), Aviation and Naval systems. JSHL is also working to produce additional variants of HNS with enhanced blast and ballistic protection to cater to niche requirements of the Indian Defence sector.

Abhyuday Jindal, Vice Chairman, Jindal Stainless (Hisar) Limited, said, "We believe HNS will immensely benefit the Indian defence sector, going forward. The hard-work and perseverance of 10 years of JSHL with Ministry of Defence has culminated in a fantastic result for the country in line with PM's vision of Make in India." HNS is manufactured at JSHL unit at Hisar with triplex refining route and manufacturing process has already been optimized for industry scale production to cater to stringent and niche requirements of Indian defence and paramilitary forces. JSHL and DMRL together have developed the Quality Assurance Plan for the High Nitrogen Steel to ensure consistent quality to meet the future demand of HNS.

Jindal Stainless (Hisar) is India's first stainless steel manufacturing unit. JSHL has its operations integrated, both backward and forward, starting from melting, casting, hot rolling to cold rolling and other value additions. JSHL has a melt capacity of 8,00,000 TPA, one of the largest in India. It is also the world's largest producer of stainless steel strips for razor blades and India's largest producer of coin blanks, serving the needs of Indian and international mints.