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A Daily Current Awareness Service



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India bargains hard for battle machines

The Defence Ministry has scrapped a Rs. 6,500 crore deal for buying 16 multirole helicopters for the Navy from America as the government is bargaining hard on price with foreign vendors and promoting Make in India in the military sector for reducing imports. The decision has come a couple of weeks before Prime Minister Narendra Modi's visit to the US where he would be meeting American President Donald Trump. With budgets not increasing in proportion with modernization demands of the armed forces, the Defence Ministry is using hard bargaining as a tool to cut down the cost of projects.

TENDERS SCRAPPED OVER MAKE IN INDIA AND PRICE ISSUES

126 RAFALE COMBAT AIR-CRAFT DEAL: Scrapped due to the complications in the tender process created by the UPA government. Deal for 36 Rafale fighter jets signed with France for ₹ 60,000 crore. India saved around one billion USD through hard bargaining.

NAVAL UTILITY HELICOPTER TENDER: Defence Minister Arun Jaitley scrapped it soon after taking over for allowing Make in India in defence sector. Tainted Italian firm Fin-

meccannica was also part of the programme.

LIGHT UTILITY HELICOPTER PROJECT: 200 light choppers were to be bought for the Army and the Air Force to replace their Cheetah and Chetak helicopters. Jaitley scrapped it for Make in India and now Russian Kamov has been chosen to make these machines in India with an Indian partner

MULTIROLE TRANSPORT AIR-CRAFT DEAL: India scrapped the deal with Russia eight

months back after the deal was hanging fire over the issues of development and price for almost 10 years

ARMY SR-SAM PROJECT: Army was planning to buy the Short Range Surface to Air Missile systems through multi-vendor competition between firms from Israel, Russia and Sweden. Jaitley scrapped the deal in favour of Make in India Akash missile systems built by the DRDO. Akash missiles have been chosen for the Air Force SRSAM project also

“The deal for procuring 16 helicopters for the Navy has been scrapped by the Defence Ministry, after it was stuck for over two years on the issues of price, and the American firm Sikorsky refused to extend the validity of its commercial bid,” Government sources told Mail today here. The final decision on the matter was taken by the ministry after the Contracts Negotiation Committee (CNC) headed by the Joint Secretary and Acquisition Manager (Maritime Systems) recommended the retraction of the tender. The deal had been in the making since 2009 when the navy initiated the process for buying 16 multirole choppers for being deployed on its warships. It was stuck over the issue of price for over last two years at the contract negotiation stage but the US firm did not agree to extend the validity of its commercial offer.

It is now learnt that the procurement of these 16 choppers would be merged with a Make in India programme to produce around 140 Naval Multirole Helicopters (NMRH) for equipping all major naval warships with one multirole helicopter each when they go in for blue water missions and anti-piracy patrols. On the need for keeping the deal alive, Defence Ministry sources said, that the American firm would extend the validity of its price bid and also reduce the price of the choppers which was higher than the benchmark set by the government. The 16 multirole helicopters are sought by the Navy for upgrading its anti-submarine warfare capabilities, which are on a decline as the Seaking helicopters bought from the UK in 1980s, would be on their way out from the force in near future, they added. Sikorsky was selected by the Navy for its requirements in December 2014 as it emerged as the only bidder in the race after Finmeccannica was chucked out of competition due to the chopper scam allegations on it.

After the tender bid was opened, sources said there was a demand made to raise the price of the choppers to meet inflation, but the defence ministry sought a further cut in the price demanded by the firm originally in its

commercial bid. Other issues like liability clause were also responsible for holding up the deal for some time, sources said. Navy sources said the deal is required badly for the force as it has to find a replacement for the SeaKing - 42 choppers bought from British firm Westland helicopters. The Seahawk is a naval variant of the US Army's legendary Black Hawk UH 60 helicopter.



Thu, 15 June, 2017

ISRO working to use kerosene as fuel for semi-cryogenic engine

By Surendra Singh

Likely To Flight-Test Engine By '21

After the historic launch of the country's heaviest rocket GSLV Mk III, Indian Space Research Organisation (Isro) is developing a semi-cryogenic engine that will use eco-friendly kerosene as propellant.

The advantage of using this semi-cryogenic engine in the launch vehicle is that it uses refined kerosene which is lighter than liquid fuel and can be stored at a normal temperature. The current fuel-a combination of liquid hydrogen and liquid oxygen--is heavier than kerosene and has to be stored at freezing temperatures of (-)253 degree Celsius.

Speaking to TOI, Dr K Sivan, director of Thiruvananthapuram-based Vikram Sarabhai Space Centre, said, "Kerosene is a fuel lighter than the conventional combination of liquid hydrogen and liquid oxygen but it gives higher thrust. Therefore kerosene occupies less space and more propellant can be packed in the semi-cryogenic engine's fuel compartment. However, liquid oxygen will be retained as oxidiser. The advantage of using this semi-cryogenic stage is the payload capacity of the launch vehicle will increase from four tonnes to six tonnes. This kind of rocket with the semi-cryogenic engine can therefore take heavier satellites into space and can also be used for interplanetary missions and deep space missions."

"We will only replace the second stage of the launch vehicle like GSLV Mk-III, which now uses liquid fuel, with the semi-cryogenic engine. The rocket will retain the cryogenic upper third stage," he said.

"Space agencies of many countries like the US and Russia are using the semi-cryogenic engine as it gives high thrust. In fact, Falcon-9 of SpaceX (the first US commercial company whose rocket has made multiple flights to International Space Centre) has also been using the semi-cryogenic engine technology," Dr Sivan said.

According to some agency reports, if things go as planned, Isro will flight-test the semi-cryogenic engine by 2021.

The Cabinet had cleared the semi-cryogenic engine project in 2008 at an estimated cost of Rs 1,798 crore. Though the idea was to develop the technology in 2014, the project got delayed.



Thu, 15 June, 2017

Finnish gadget hands out blood test results in 1 hour

By Rajeev G.R.

Mobidiag develops palm-sized device to detect bacteria

With testing for bacterial pathogens going down to the DNA level, European companies are in a race to develop smarter tools to make the process phenomenally faster and accurate. Palm-sized gadgets test in just one hour the blood samples taken from a patient and list the harmful bacteria.

"In molecular diagnostics, we amplify short areas of bacterial DNA to get the results. It's the fastest growing segment in the medical field, and the results are accurate," says Tuomas Tenkanen, CEO of Mobidiag, a company based in Espoo, the erstwhile home of Nokia in Finland.

The company has built a DNA database of over 50 kinds of bacteria, larger than what its European competitors have developed. The technology helps detect antibiotic resistance by listing bacteria that have escaped commonly administered drugs.

The company is planning to add the bacteria causing tuberculosis to the DNA database.

As the simple test lists the bacteria, doctors can desist from prescribing broad-spectrum antibiotics and use targeted drugs for a specific bacterium.

Disruptive technology

The disruptive technology reduces the role of paramedics to just collecting samples. They just have to pipette the sample on the gadget, place it in a machine and in one hour, the results are ready.

As Mobidiag works to complete clinical trials of the device, Mr. Tenkanen says it will be priced much lower than the products of its competitors, which retail them for €150 (₹10,865) apiece.

One-time use

The catch is that it is a one-time-use device. To achieve economies of scale, companies will have to foray into countries like India, where the load of bacterial diseases is high.

In Mr. Tenkanen's lab, scientists in white protective gear handle harmful bacteria as they race against the clock to build the DNA database and put the device into the market.

In another locked room, bacterial DNA is being amplified. A group is training a set of professionals from abroad in the use of another machine, which essentially uses the same technology but can test multiple samples and be used multiple times.

Mr. Tenkanen started the company with funding from Tekes, the Finnish innovation fund, and his own money.

(The writer is in Helsinki on the invitation of the government of Finland.)



Thu, 15 June, 2017

Bob Dylan accused of plagiarism in his Nobel lecture

A writer says the rock legend lifted sections from an online study guide for students

A writer has charged that rock legend Bob Dylan lifted sections of his Nobel Prize lecture from SparkNotes, the free online study guide aimed at students.

Dylan, the surprise winner of the Nobel Prize for Literature, last week delivered a long-awaited lecture that was a requirement to receive the eight million kronor (\$923,000) prize from the Swedish Academy. Author Andrea Pitzer, analysing his lecture for the news site *Slate*, said she found striking similarities between Dylan's quotations and the summary of Herman Melville's classic novel *Moby-Dick* found on SparkNotes.

Dylan, for example, quotes Melville as calling the elusive whale Moby "the embodiment of evil." But Pitzer pointed out that the phrase does not appear in the novel itself, although it appears in the SparkNotes synopsis.

At least 20 references in Dylan's lecture about *Moby-Dick* bear some similarity to the SparkNotes version, she wrote. Pitzer noted that Dylan has long been unabashed about adapting musical and lyrical passages into his songs.

"Dylan remains so reliant on appropriation that tracing his sourcing has become a cottage industry," she wrote.

Lifting from earlier works is much more commonplace in music than in literature, where accusations of plagiarism are a major dent on reputation.

No comment

Dylan — whose representatives did not comment on the *Slate* article — took more than two weeks before acknowledging the prize and skipped the ceremony in December.

But Dylan, famously taciturn when he is not singing, finally explored his connections with literature in his Nobel lecture in which he also cited as influences Homer's epic poem *The Odyssey* and First World War novel *All Quiet on the Western Front*. Sara Danius, the permanent secretary of the Swedish Academy, had described the lecture as "extraordinary and, as some might expect, eloquent."

Business Standard

Thu, 15 June, 2017

No Indian university in world's top-100 list; China improves ranking

By Vinay Umarji

Chinese varsities to challenge institutions in North America, Europe: The Rankings Editor Phil Baty

Indian universities yet again missed a spot on the Times Higher Education (THE) World Reputation Rankings 2017. The list is compiled through research insight, from leading academics across the world. No Indian university made it to the top-100 list, which Harvard University topped.

Asian universities, however, improved their performance, with 28 of them on the list. Some Chinese institutions went ahead of several prestigious European counterparts.

Massachusetts Institute of Technology (MIT) and Stanford University retained their second and third positions that they had secured last year. Oxford and Cambridge came in a joint fourth.

University of California, Berkeley, Princeton University, Yale University, University of Chicago and California Institute of Technology followed, making up the top-10 list. Eight of these universities are in the US. Forty-two US universities are among the top 100. "The Times Higher Education World Reputation Rankings are based on nothing more than subjective judgement – but it is the considered judgement of senior, published academics, the people best placed to know the most about the world's universities," said THE

Rankings Editor Phil Baty. He noted the rise of Asian, particularly Chinese universities. "These are overtaking distinguished Western institutions, including the Imperial College London, the University of Pennsylvania and Cornell University."

Baty said Chinese universities were in a position to challenge institutions in North America and Europe. The absence of Indian institutes in reputation rankings is also due to slower adoption of proactive positioning as against their international, said Narayanan Ramaswamy Partner & Leader for Education & Skilling Sector, KPMG in India.

"Most global universities take conscious efforts to position themselves regarding who they are, why students should consider them or who have they hired. This is something which Indian institutes have rarely done. Even for IITs. It happens more through their alumni network than anything that they have proactively done. While such global rankings are recent phenomena, Indian institutes have been slower in adopting them as compared to their global counterparts. India has now started to do this and initiatives such as NIRF are welcoming steps in that direction," said Ramaswamy.

TOP 10			
Institute	2016	2017	Country
Harvard University	1	1	USA
Massachusetts Institute of Technology	2	2	USA
Stanford University	3	3	USA
University of Cambridge	4	4	UK
University of Oxford	5	4	UK
University of California	6	6	USA
Princeton University	7	7	USA
Yale University	8	8	USA
University of Chicago	9	9	USA
California Institute of Technology	10	10	USA

Source: timeshighereducation.com

Thu, 15 June, 2017

WHY BOSPHORUS IS CHANGING COLOURS

AFP



A sudden change in the colour of the Bosphorus Strait that divides the continents of Europe and Asia in the Turkish city of Istanbul has surprised residents, with scientists putting it down to a surge in a species of plankton across the Black Sea. The sudden transformation of the usually blue waters (above) of the Bosphorus to a milky turquoise since the weekend had alarmed some residents. Some blamed pollution spill while others even suggested it could be linked to an earthquake that rocked the Aegean region on Monday afternoon. But scientists said the cause was a surge in numbers of the micro-organism *Emiliana huxleyi*, also known as Ehux