

IIT Ropar develops first-of-its-kind Oxygen rationing device - AMLEX

Chennai, July 21, 2021: To increase the life of medical oxygen cylinders three fold, the Indian Institute of Technology, Ropar has developed a first-of-its-kind Oxygen Rationing Device – AMLEX that supplies a required volume of oxygen to the patient during inhalation and trips when the patient exhales CO₂. This process saves oxygen which otherwise unnecessarily get wasted.

So far, during exhalation, the oxygen in the oxygen cylinder/pipe is pushed out along with the exhaled CO₂ by the user. This leads to wastage of a large volume of oxygen in long run. In addition to this, a large volume of oxygen escapes from the openings of the mask to the environment in the resting period (between inhalation and exhalation) due to continuous flow of life saving gas in the mask. As we have seen the demand of medical oxygen has jumped manifold amid the second

wave of Covid-19, the device would help in stopping the unwanted wastage of the same.

"The device can operate on both portable power supply (battery) as well as line supply (220V-50Hz)", said Director, IIT, Ropar, Prof. Rajeev Ahuja.

It has been developed by PhD students of Biomedical Engineering Department of the institution - Mohit Kumar, Ravinder Kumar and Amanpreet Chander under the guidance of Dr. Ashish Sahani, Assistant Professor, Department of Biomedical Engineering.

"Made specifically for oxygen cylinders, AMLEX can be easily connected between oxygen supply line and the mask worn by the patient. It uses a sensor which senses and successfully detects inhalation and exhalation of the user in any environmental condition", said Dr Sahani. This ready to use device works with any



commercially available oxygen therapy masks having multiple openings for air flow.

Appreciating the innovation, Dr GS Wander, Director, Research and Development at Dayanand Medical College, Ludhiana, said that in the present pandemic times we all have learnt the importance of effective and pertinent use of life saving Oxygen. He said though many hospitals are increasing their oxygen production capacity, a device like this can really help in limiting the use of oxygen in

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extremely suitable for military aviation. Apart from the IAF, the Indian Army, the Indian Navy and the Indian Coast Guard also operate this helicopter.

The Sarang Team was formed in 2003 at Bangalore and its first international display was at the Asian Aerospace Airshow at Singapore in 2004. Since then, Sarang has represented Indian aviation at air shows

PM greets people on occasion of Ashadhi Ekadashi

Chennai, July 21, 2021: The Prime Minister, Shri Narendra Modi has greeted the people on the occasion of Ashadhi Ekadashi.

In a tweet, the Prime Minister said, "On the auspicious occasion of



Ashadhi Ekadashi, my greetings to everyone. On this special day, we pray to Lord Vitthal to bless us with abundance of happiness and good health. The Varkari movement represents the finest of our traditions and emphasises on harmony and equality."

Access to Power Supply Under Saubhagya

Chennai, July 21, 2021: Government of India launched the Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya in October, 2017 with the objective to achieve universal household electrification for providing electricity connections to all willing un-electrified households in rural areas and all willing poor households in urban areas in the country by March, 2019. All households were reported electrified by the States, except 18,734 households in Left Wing Extremists (LWE) affected areas of Chhattisgarh as on 31.03.2019. Subsequently, seven States namely Assam, Chhattisgarh, Jharkhand, Karnataka, Manipur, Rajasthan and Uttar Pradesh had reported



that around 19.09 lakh un-electrified households, identified before 31.03.2019, which were unwilling earlier but have expressed willingness to get electricity connection. All these seven States have reported 100% household's electrification as on 31.03.2021. A total of 2,817 crore households have been electrified since the launch of Saubhagya, up to 31.03.2021.

To mitigate the liquidity problems in power sector due to low power consumption during the lockdown imposed due to COVID-19, Government of India announced a Liquidity Infusion Scheme as part of Atma Nirbhar Bharat Abhiyan on 13th May 2020. Under the scheme,

Power Finance Corporation (PFC) Ltd. and REC Ltd. extended special long-term transition loans at concessional rates to Power Distribution Companies (DISCOMS) to clear their outstanding dues towards purchase of power from Central Public Sector Undertaking (CPSU) Generation (Genco) & Transmission companies (Transcos), Independent Power Producers (IPPs) and

Renewable Energy (RE) generators, as existed on 30.06.2020. As on 30.06.2021, REC & PFC have sanctioned Rs.1,35,537 crore and disbursed Rs.79,678 crore respectively to States under Liquidity Infusion Scheme.

This information was given by Union Minister for Power and New and Renewable Energy, Shri R.K. Singh in a written reply in Rajya Sabha Today.

Meeting of the BRICS Contact Group on Economic and Trade issues (CGETI) held

Chennai, July 21, 2021: For the year 2021, India is the Chair of the BRICS (Brazil, Russia, India, China & South Africa). Of the various groups of BRICS, the Contact Group on Economic and Trade Issues (CGETI) is responsible for economic and trade matters. The Department of Commerce is the national coordinator for the BRICS CGETI.

Meeting of the CGETI was held from 12-14 July 2021. During the three day meeting, the BRICS Members deliberated on the following proposals circulated

by India, for strengthening and increasing the Intra-BRICS cooperation and trade:

BRICS Cooperation on Multilateral Trading System;

BRICS Framework for ensuring Consumer Protection in E-Commerce;

Non-Tariff Measures (NTM) Resolution Mechanism for SPS/TBT Measures;

Sanitary and Phytosanitary (SPS) Working Mechanism;

Cooperation framework for protection of Genetic

Resources, Traditional Knowledge and Traditional Cultural Expressions;

BRICS Framework on Cooperation in Professional Services.

BRICS Members agreed to take forward India's proposals to finalise them before the BRICS Trade Minister's meeting to be held on 3 September 2021, to be chaired by Shri Piyush Goyal, the Commerce and Industry Minister.

Two workshops on Services Trade Statistics to be held on 16 July 2021 and 13 August 2021, to be organised by the Reserve Bank of India.

SARANG TO PERFORM AT MAK'S AIR SHOW IN RUSSIA 20 JULY 2021

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DRDO indigenously develops High Strength Beta Titanium Alloy on industrial scale

Chennai, July 21, 2021: Defence Research and Development Organisation (DRDO) has indigenously developed a High Strength Metastable Beta Titanium Alloy containing Vanadium, Iron and Aluminium, Ti-10V-2Fe-3Al on industrial scale for applications in aerospace structural forgings. It has been developed by Defence Metallurgical Research Laboratory (DMRL), a premier Hyderabad based laboratory of DRDO. These alloys are already being used by many developed nations in recent times as beneficial substitute for the relatively heavier traditional Ni-Cr-Mo structural steels to achieve weight savings.

to their higher strength, ductility, fatigue, and fracture toughness – making them increasingly attractive for aircraft structural applications. Furthermore, their relatively lower lifetime cost, owing to superior corrosion resistance in comparison to steels, is an effective trade-off to justify the use of this expensive material in India too.

The DMRL has carried



out raw material selection, alloy melting, thermo-mechanical processing, ultrasonics-based Non-Destructive Evaluation (NDE), heat treatment, mechanical characterization, and type certification in active collaboration with several agencies.

The excellent forgeability of high strength-to-weight ratio Ti-10V-2Fe-3Al alloy facilitates manufacture of intricately configured components for aerospace applications with potential for significant weight savings. Some of the components which may be forged from this alloy include slat/ flap tracks, landing gear, and drop link in landing gear – among several others.

The high strength beta titanium alloys are unique due

replaced by Ti-10V-2Fe-3Al alloy forgings in the near future with a potential of 40% weight savings. The landing gear drop link is the first component forged successfully by ADA at HAL, Bengaluru with DMRL's involvement and duly certified for airworthiness.

Raksha Mantri Shri Rajnath Singh has congratulated DRDO and the industry for indigenous development of High Strength Metastable Beta Titanium Alloy which will be useful for aerospace structural forgings.

Secretary, Department of Defence R&D and Chairman DRDO Dr G Satheesh Reddy applauded the dedicated efforts by the teams involved in the indigenous development of this technology.

Sri. Kalasalingam University two days national conference on "Emerging Trends in Agricultural Science and Technology"

Virudhunagar, July 21, 2021: At Kalasalingam University, Kalasalingam School of Agriculture and Horticulture organized the two days National level web conference on Emerging Trends in Agricultural Science and Technology on a virtual platform.

The Vice President Dr S. Shashi Anand inaugurated the conference.

The Vice Chancellor Dr R. Nagaraj and the Registrar Dr V. Vasudevan delivered felicitation addresses.

Dr. P. J. Edward George gave welcome address.

Introductory talk was delivered by the HoD, Dr. D. Sivakumar.

The chief guest, Dr. E. M. Muralidharan, KFRI, Kerala addressed on today modern trends and equipments used in Agriculture.

The Guest of Honor Karan Sikri, CEO – Sikri Farms, Haryana participated and addressed on crops.

In the Valedictory session, the best paper presentation was awarded to Mr. K. Kannan, Ms. Sushma, Dr. Ananda Krishnaveni and Mr. T. Praveen.



Shree, Dr. Jagamohan Meher and Dr. S. Vasumathi. The Best Poster presentation was awarded to Mr. Manivel, Dr. K. Kannan, Ms. Sushma, Dr. Ananda Krishnaveni and Mr. T. Praveen.

The two days conference organized well by all the staff members of Horticulture and Agriculture Departments.

Dr Keerthy Vijaya gave vote of thanks.