

India joins the ranks of nations at the forefront of Metal-G production

Ground Breaking Ceremony of Pilot plant for recovery of Metal-G from Spent liquor of Alumina refinery at NALCO, Damanjodi, Odisha

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In a significant step towards a cleaner, greener future, the Heavy Water Board (HWB), in collaboration with Bhabha Atomic Research Centre (BARC) has started construction of a demonstration plant for recovery of valuable metal from spent liquor of alumina refinery based on Ion-Exchange (IX) process. This pioneering project, located at the NALCO, Damanjodi Odisha, marks a crucial milestone in India's efforts to transition towards self-reliance in semiconductors.

The ground breaking ceremony was held on 20th November, 2025, at NALCO refinery in Damanjodi Odisha by Shri S. Satyakumar, Chairman & Chief Executive, Heavy Water Board (HWB) and Shri Brijendra Pratap Singh, Chairman and Managing Director, NALCO. The Occasion was graced by prominent figures, including Dr. Raghvendra Tiwari, Director Material group, BARC, Shri. Jagdish Arora, Director (P&T), NALCO along with other esteemed dignitaries from BARC, HWB and NALCO.

The Chairman & Chief Executive, Heavy Water Board, Shri S. Satyakumar expressed that this first-of-its-kind facility demonstrates the potential of the indigenously developed special resin and solvent in recovering Metal-G from the spent liquor. By recovery of Metal-G from spent liquor of NALCO, we will be reducing dependency on import to cater our countries semiconductor requirements.

Metal-G, with its very low melting point and very high boiling point, has applications in electronics for high-speed semiconductor and integrated circuits (IC's) for space and defence applications. This pilot plant offers a breakthrough by providing an environment friendly, scalable solution for Metal-G production which aligns with the national vision of Atmanirbhar Bharat

With this ambitious demonstration plant, India joins the ranks of nations at the forefront of Metal-G production.



Source: DAE

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