

Tit Bit in Welding

News Capsules

Expansion in Oil & Gas Industry & Refineries

*Chennai Petroleum Corporation (CPCL), a subsidiary of IOCL, has kick started the activities for the establishment of proposed 9 MMTPA grass root refinery, to be developed, at an estimated cost of ₹ 31,580 crore at Nagapattinam, Tamil Nadu. The project will act as a catalyst for development of downstream petrochemical and ancillary industries,

*The Numaligarh refinery located in the Golaghat district of Assam is being expanded to add six MTPA of additional processing capacity. The refinery expansion project also involves the construction of two cross-country pipelines, including a 1,398 km crude oil pipeline from Paradip (Odisha) to Numaligarh and a 654 km product pipeline from Numaligarh to Siliguri (West Bengal).

Plan for (Flue Gas Desulphurisation) FGD Implementation in Fossil Fuel Thermal Power Plants

*A recent report recommends adopting a graded action plan for phased implementation of FGDs by giving preference to areas with the highest surface concentration of SO₂. Phase 1 involving FGD implementation in 40 thermal plants to be completed by July 2025.

Phase 2 includes 49 thermal power plants, planned to happen between July 2026 to July 2029.

*Various contractors, which are setting up FGD systems, are GE Power India, BHEL, ISGEC Enviro, L&T Power, Thermax, Mitsubishi Hitachi Power Systems India etc. The project involves welding with Nickel Superalloys such as C-276, 686 and Titanium consumables.

Power & Energy

***Sterlite Power** plans to set-up largest green energy corridor in Gujarat. The corridor forms a critical part of the world's largest 30,000 MW Hybrid renewable energy park coming up in Kutch.

***NTPC, IOCL ink pact to set up renewable energy projects.** Hyderabad-based GREENKO GROUP has emerged as the lowest bidder in the world's first and largest technology.

***Mahan Energen Limited (MEL), a subsidiary of Adani Power Limited (APL)** has proposed expansion of its existing 1200 MW (2x600 MW) power plant at Singrauli, Madhya Pradesh by addition of 1600 MW (2x800 MW). The expansion units shall be based on Ultra-supercritical technology.

***NTPC Ltd**, is going to set up new thermal power units at Sipat (1x800 MW) in Chhattisgarh, Singrauli (2x800 MW) in Uttar Pradesh, Darlipali (1x800 MW) in Odisha, and Lara (2x800 MW), again in Chattisgarh. All these four projects will be expansion projects wherein additional units will be added to the existing thermal power plants.

Resurrection of INS Vikrant

The commissioning into service of INS Vikrant, the Indian Navy (IN)'s first indigenous aircraft carrier-1 or IAC-1, is being celebrated over the country's proficiency in domestically sourcing material, systems and components to successfully build the 43,000-tonne platform. Vikrant's construction was by Cochin Shipyard Limited (CSL) and included 23,000 tonnes of warship grade steel, 2,500 km of electrical cables and 150 km of specialised pipes, all of which were obtained from scores of domestic private and public sector manufacturers and micro, small and medium enterprises.

Launching of TEJAS Light Combat Aircraft

The indigenous Power take off (PTO) shaft Designed and Developed by CVRDE, DRDO Chennai was test flown with LCA Tejas LSP-3 aircraft. This was a great technological feat achieved by realization of complex high speed rotor technology. This shaft was made from Titanium alloy.

The integration of this indigenously-developed fighter aircraft for the Indian Air Force and the Indian Navy, was done at HAL. The Tejas currently has three production models - Tejas Mark 1, Mark 1A and trainer. The IAF plans to procure 324 aircraft in all variants, including the Tejas Mark 2 currently under development. The Tejas Mark 2 is expected to be ready for series production by 2026. The aluminium-lithium alloys and titanium alloys constitute nearly 55% while balance is carbon-fibre composite materials.