

LOK SABHA
UNSTARRED QUESTION NO. 2070
TO BE ANSWERED ON 28th July, 2022

Technology to Increase Oil Production

2070. SHRI KURUVA GORANTLA MADHAV:
DR. BEESETTI VENKATA SATYAVATHI:

पेट्रोलियम और प्राकृतिक गैस मंत्री

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

- (a) whether the Government has introduced state of the art technology to increase the oil production and refining capacity of the country;
- (b) if so, the details thereof and if not, the reasons therefor; and
- (c) the details of research and development activities conducted by the Oil PSUs during the last two years and the current year?

ANSWER

पेट्रोलियम और प्राकृतिक गैस मंत्रालय में राज्य मंत्री
(श्री रामेश्वर तेली)

MINISTER OF STATE IN THE MINISTRY OF PETROLEUM AND NATURAL GAS
(SHRI RAMESWAR TELI)

(a) & (b) Oil companies are using sophisticated technology to increase oil production and for refining of crude oil. Various modern and advance technology has been deployed which *inter-alia* include Radial Jet Drilling, Hydro-fracturing of wells, Installation of Electrical Submersible Pump (ESP), Enhanced Oil Recovery/ Improved Oil Recovery (EOR/IOR) techniques, Cyclic Steam Stimulation technology, Petro Fluidized Catalytic Cracking, Ebullated Bed Residue Hydro-processing and Treating, etc. Further, usage of advance technology in refinery process is reflected in the increase in the Nelson Complexity Index (NCI) of Indian Refineries. The average NCI of Indian refineries, in 2022 is 10.71 as against World average of 6.9.

(c) Major Research and Development activities conducted by the Oil PSUs during the last two years and the current year *inter-alia* include:-

- i. Development of Chemical Formulation for Long Term Fines Stabilization in Sandstone Reservoir to Maintain Well Productivity.
- ii. Development of in-house technology for bio-stimulation of methanogens in hydrocarbon reservoir for improved recovery of residual oil from mature oil fields.
- iii. Oil Field Analyser Software is used for production data analysis for Oil & Gas producing Asset.
- iv. Field Implementation of In-House Developed Microbially Enhanced Oil Recovery (MEOR) Technology
- v. Development of surfactant-based emulsion formulation for well stimulation as an Improved Oil Recovery (IOR) technique.

- vi. Choke Controlled Intermittent Gas Lift for Low Producing Wells.
- vii. Development of novel catalysts and additives for refining process.
- viii. Development of Hydrotreating Catalyst INDICAT.
- ix. Developed and demonstrated Technology for improvement of product quality and reduction of Energy Use for Naphtha Splitter Unit at Kochi Refinery.
- x. Developed membrane based separation and purification process of hydrogen from fuel gas streams.
