National Institute of Technology,

Tiruchirappalli - 620015

5th October 2018

Press report for the inauguration of NISARGRUNA (Biogas Plant) and functioning of BARC, Dept. of Atomic Energy, Technology Display and Dissemination Facility at NIT, Tiruchirappalli

The National Institute of Technology, Tiruchirappalli (NITT) had signed a Memorandum of Understanding (MoU) last year with Bhabha Atomic Research Centre (BARC), Government of India, Mumbai for promoting various technologies for societal/rural benefits such as NISARGRUNA (Biogas Plant), Soil Organic Carbon Detection Kit, Domestic Water Purifier, Foldable Solar Dryer and Fluoride Detection Kit. Based on this MoU, NITT and BARC jointly established the DAE Technologies Display and Dissemination Facility (DTDDF) centre at NIT Tiruchirappalli.

The DTDDF centre selected the location of NISARGRUNA (Biogas Plant) of capacity 1 MT/ day behind the Mega mess II and completed the construction for the generation of biogas using mess kitchen waste (vegetable waste, food waste and wastewater from the kitchen) generated from hostel premises. Dr. V.P. Venugopalan, Associate Director, Bio-science group (A), BARC officially inaugurated this Biogas Plant the on 05.10.2018 in the presence of Dr. Mini Shaji Thomas, Director, NIT Tiruchirappalli and accompanied by the Registrar, Deans, faculty, staff and students of NITT along with BARC members. The BARC experts briefed about the operation principle and feature of NISARGRUNA Biogas Plant.

Conventional Gobar gas plants have a single digester and produce biogas containing 55-65 per cent of methane and 45-35 per cent of carbon dioxide. But the Nisargruna plants are biphasic (aerobic followed by anaerobic phase) and produce biogas containing 70-80 per cent of methane and only 30-20 per cent of carbon dioxide. 1 MT/day biodegradable waste resource processing through Nisargruna creates an opportunity for an employment and it will produce 25 - 30 kg Methane gas and 50 - 90 kg manure per day. The gas generated will be used as a fuel in the messes for cooking. Weed-free manure has high nitrogen contents and acts as an excellent soil conditioner. It offers “Zero garbage and Zero effluent”, and this technology will be more helpful for the kitchen and solid waste management at NITT.

Apart from Biogas plant construction, the DTDDF centre had organised workshops, meetings, exhibitions, seminars and demonstrations at NITT and in surrounding villages/areas to spread the awareness about DTDDF products, and encouraged the youths to enrol in the entrepreneurship development workshops. NITT had identified five villages for pursuing UNNAT BHARAT MISSION, and the DTDDF centre will implement the BARC technologies in those villages.

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