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**Regional Training Course (RTC)
on Applying Radiation Technologies in Industries
from October 15 until October 26, 2018 in Saclay INSTN**

The International Society of Tracers and Radiation Applications (ISTRA) hosted another successful training course at the National Institute for Nuclear Science and Technology (INSTN) in Saclay with the support of IAEA. A total of participants counted eleven trainees' registered for the training.

The RTC was handled from October 15-26 under the project TN-RER1020 for members from developing countries under the leadership of two lecturers.

The purpose of the training aimed at improving the capability of national project team members for diagnosing industrial processes using radiotracers technique and gamma column scanning and thus to promote the technology in industries, and certifying practitioners of the technologies.

Lecturers have presented an information regarding the use of a radiotracer to explore the mechanism of chemical reactions as well as tracer's flow visualization through the exercise with different technologies and techniques.

Hearers were explained about the growing role of using radiotracers technology in the industry. Particularly, its practice to diagnose specific causes of inefficiency in a plant or process operation and to generally investigate processes in industries and those related environments where a great cost-benefit ratio can be gleaned from process optimization and troubleshooting, such as in the transport of sediments, detection of obstacles and debris in pipelines, columns etc.

Participants got training on using of the radiotracers' tools of for research, development and regulatory infrastructure. Training material consisted of the radiotracer residence time distribution method for industrial and environmental applications.

The training consisted of theoretical and practical sessions. The theoretical part covered lectures which reviewed the principles and the short review of tracer



technique for industrial applications and sediment transport studies, principles on Residence Time Distribution (RTD) modeling and its interpretation.

The practical training included the use of the flow-rig to perform tracer experiment with the injection of Tc-99m with, use of the data acquisition system, data treatment, and analysis, setting-up radiation detectors used for radiotracer experiments, as well as gamma scanning to identify sediments and different debris by gamma scanning.

Participants were asked to pass an examination at the end of the training course on theoretical and practical part with the aim to issue a certificate of competences at Level 1 or 2 in Radioactive Tracers Method, RTD and Sealed Sources Method, Column scanning technique.



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