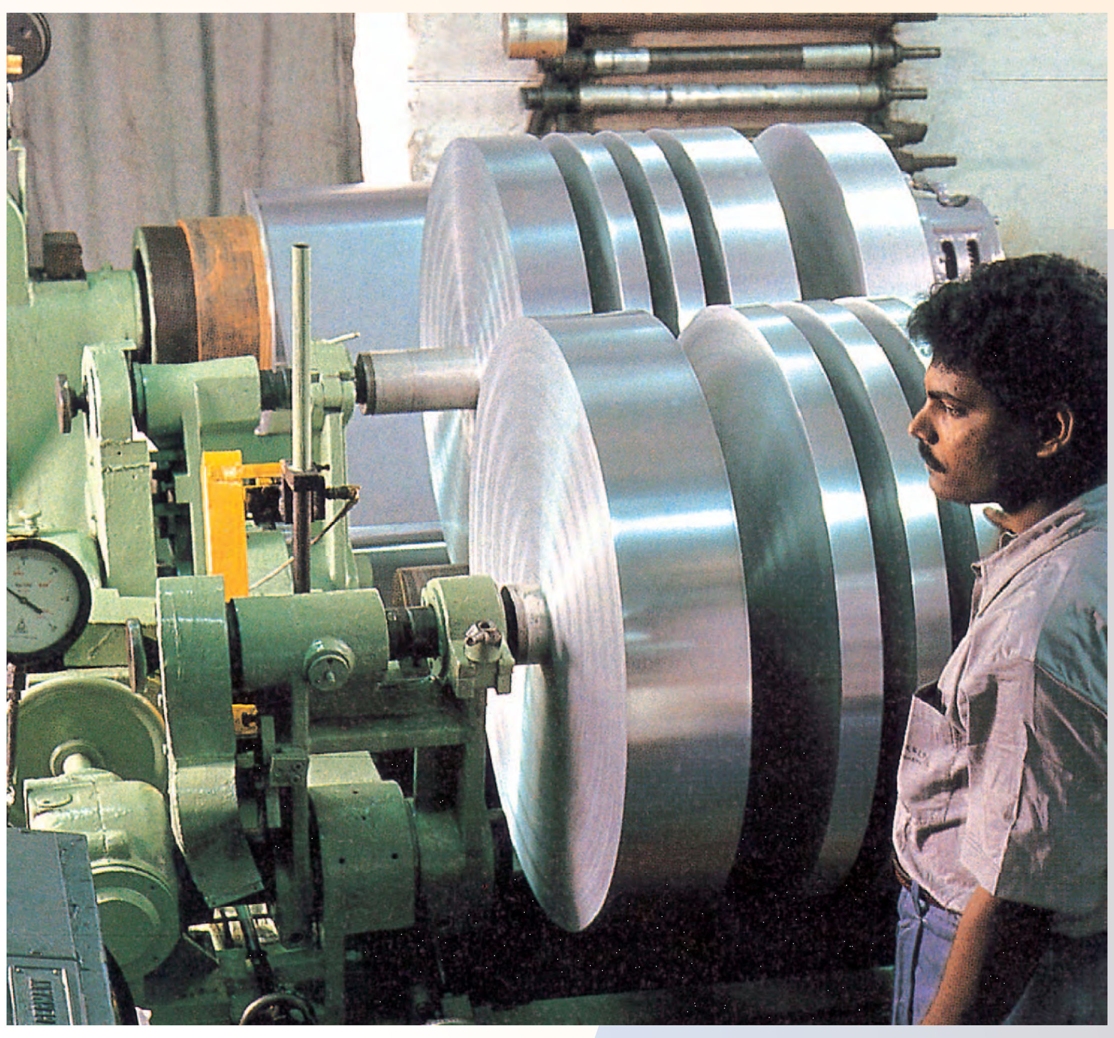
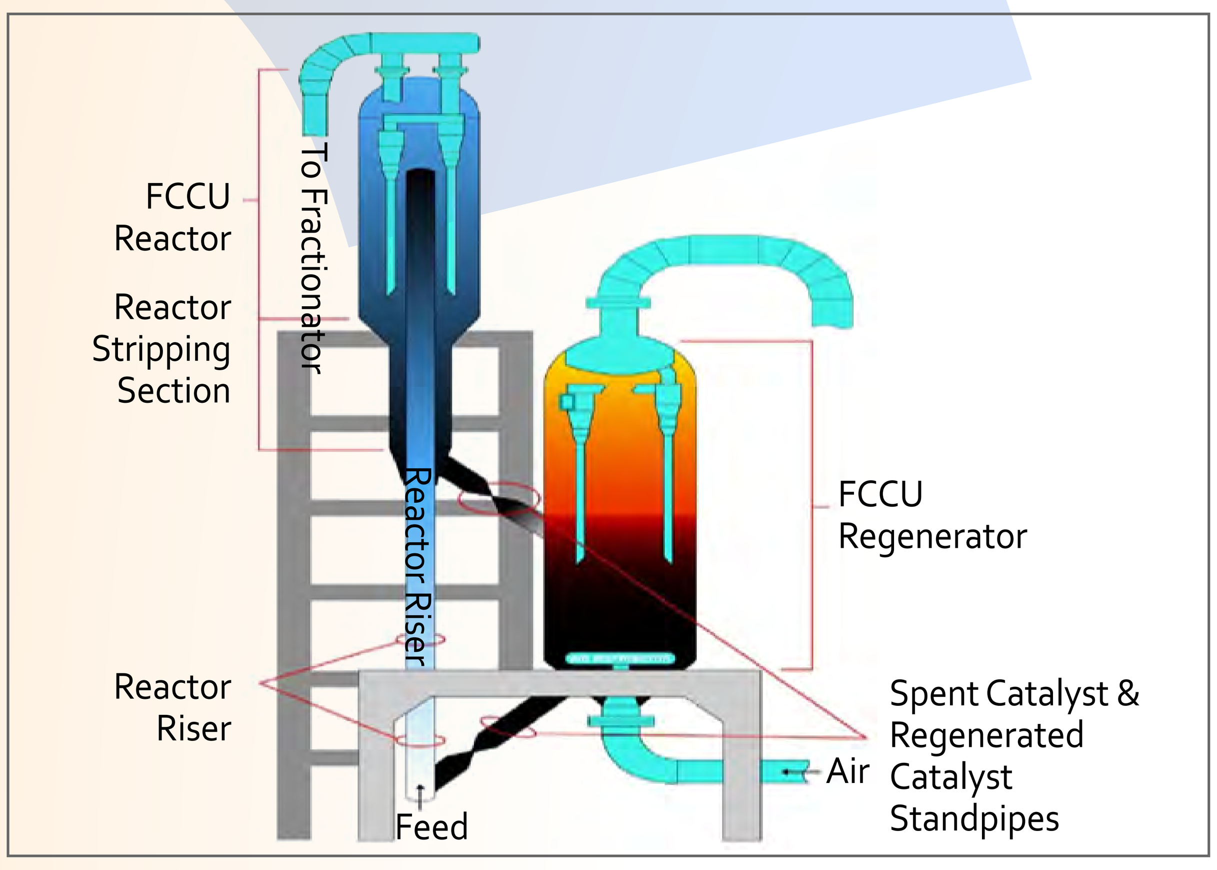
Industry

Industrial applications utilizing radiation and radio-isotopes are important areas benefiting from the use of nuclear techniques.

Some prominent examples include: radiation processing for manufacturing new materials; non-destructive testing for quality control; nucleonic control systems for quality control and mineral analysis; and, tracer and sealed source technology for problem analysis and process optimization.





Radiotracer Techniques for Investigations in Fluid Catalytic Cracking Units

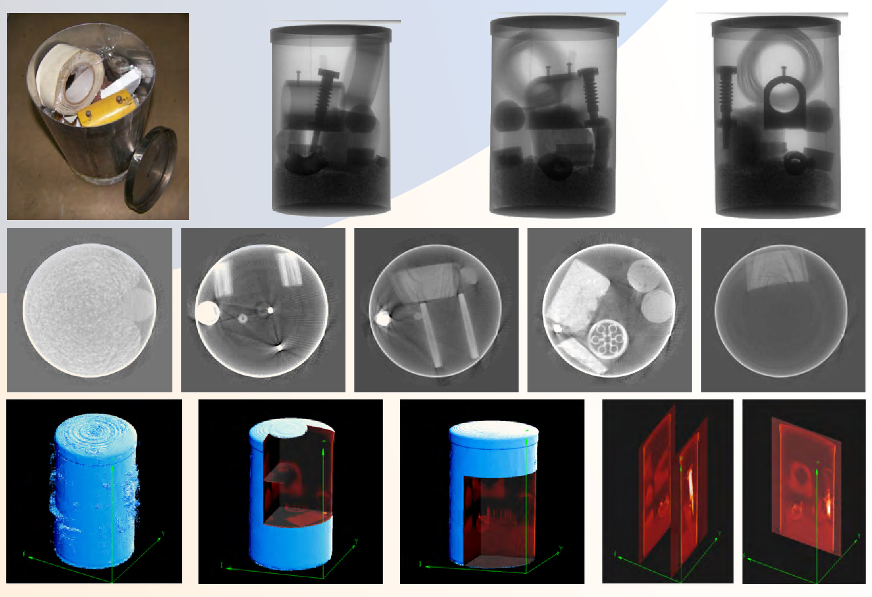
Fluidized Catalytic Cracking Units [FCCU] are advanced systems currently used to convert middle and bottom distillates like gas oil and residuum to lighter fractions like Gasoline and Diesel [transportation fuels] using catalysts at designed temperature and pressure.

Radioisotopes play important role in this process optimization.

Strengthening skills in Non Destructive Testing(NDT) for Regional Industry

- Certification of NDT personnel based on ISO has been introduced to AUL, BGD, IND, MAL, NZE, PHI, and SRL.
- To date, more than 20,000 personnel across the region have been trained through a series of regional training courses and certified in accordance with ISO/IEC9712 and ISO17024.

Radiograpic Testing of repaired wicket of the Samanala Hydro Power Station (Sri Lanka)



Digital Radiography and Tomography

- Development works in advanced Imaging Systems like Digital Radiography and Computed Tomography for non-medical applications has been established for non-destructive examination of selected engineering specimens and low activity nuclear waste containers.
- Full infrastructure and capability in Digital Radiography and Tomography technology know-how is currently available with limited RCA MSs including China, India, Korea and Malaysia.

Application of Radiation Processing to Natural Polymers in the Health and Environment Area

- Different natural polymers available in the region were modified by radiation to synthesize new products such as hydrogel wound dressing, materials for tissue engineering applications and nano-composites.
- Radiation processing technology for environment remediation was also established such as radiation modified polymers for metal absorption, soil conditioning, etc.