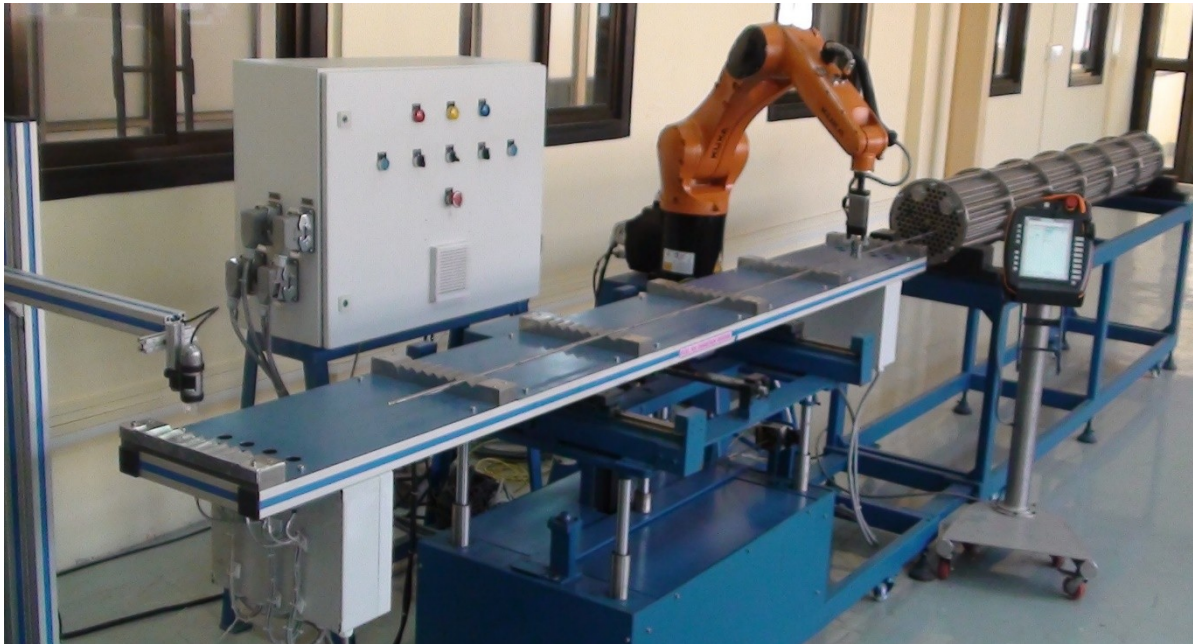


Robotic Loading of PFBR Pins into Transport Magazine

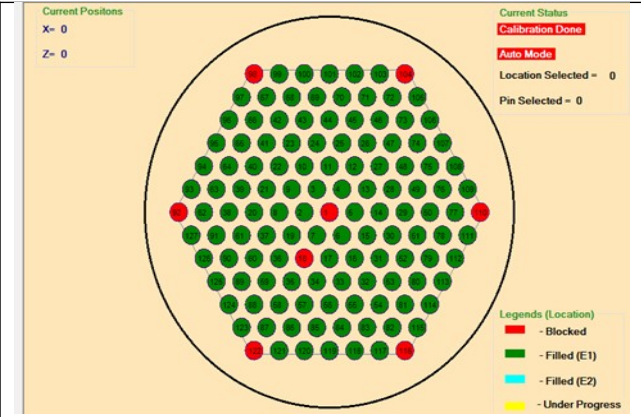



Robot pushing a fuel pin into transport magazine

Nuclear fuel pins for PFBR are transferred from fuel fabrication facility to reactor site in transport magazines. An autonomous robotic solution has been developed by DRHR for the loading of fuel pins into transport magazines. The system consists of a highly accurate position control system for the pins and an articulated robotic arm with a specially designed gripper. The robotic loading system provides active aid to human operators and hence protects them

from radioactive hazards.

As a part of the automation work, deep learning based algorithm and hardware have been developed for autonomous reading of fuel pin number and preparing a computerised data base.

	
<p>Computerised interface for fuel pin storage information</p>	<p>Deep learning algorithm based fuel pin number reading</p>

The system commissioned at Fuel Fabrication Facility, Tarapur in Dec, 2019