BARC TRANSFERS TECHNOLOGY OF GUIDE SLEEVE CUTTING MACHINE

The technical know-how of Special Purpose Machine for cutting Guide Sleeve and Sensor Tips and also the actual machine was transferred to NPCIL on April 04, 2005 by BARC.

A special purpose machine tool and machining process has been developed to cut the guide sleeve and sensor tips of the fuelling machine of 220 MW PHWR, in case the guide sleeve or sensor tips cannot be retracted back to the fuelling machine after refuelling operation. This will be an emergency situation for a PHWR. Material of the guide sleeve is 17-4 PH, having core hardness of 35HRC and the surface is nitrided having a hardness of 60 HRC. The thickness of guide sleeve is 5.75 mm. Approach for cutting this tube is only from the other end of the reactor channel, which is at a distance of 10 meters.

In mock up operations, actual guide sleeve was machined from a distance of 10 meters. But machining can be done even if this distance is more or less depending upon the requirements.

Technology Transfer and Collaboration Division coordinated all activities related to the transfer of this technology.