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Ion Beam Application to Material Analysis in Ghana: Problems and Prospects

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In 2016, Ghana's with assistance of International Atomic Energy Agency (IAEA) installed a 1.7MV 5SDH-2 Pelletron accelerator donated by Government of Netherlands through a technical co-operation agreement. A new beam line is installed on the 15degree port at the high energy end of the accelerator and connected to an RC-43 multipurpose chamber with IBA capability. This study provides a summary of various research works carried out at the Centre to demonstrate the versatility of the installed system vis-a-vis the challenges of operating such a sensitive analytical facility in a developing country like Ghana. The limitations of the installed system are identified and strategies to overcome these difficulties in order to expand the utilization of the accelerator are presented and distributed.

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