

## **Requirements/ Responsibilities for Manufacturer/ Supplier and Contract Awarding Party**

### **1) Manufacturer/Vendor of Equipment**

A manufacturer / vendor of radiographic equipment shall:

- (i) obtain licence from the Competent Authority for the manufacturing and supply of Exposure Device, source changer and the accessories;
- (ii) supply IGRED/source changer/X-ray equipment/accelerator only after obtaining a Type approval/NOC from the Competent Authority and only to users authorised by the Competent Authority;
- (iii) provide the user along with the equipment:
  - (a) technical specifications;
  - (b) operating/servicing/ maintenance manuals;
  - (c) instructions for handling emergencies; and
  - (d) training on operational aspects and maintenance of above exposure device.
- (iv) provide user with detailed procedures for quality assurance tests and checks to be carried out with specified frequency to verify correct performance of the device/equipment;
- (v) be responsible for installation, commissioning, servicing and maintenance, decommissioning/dismantling of equipment and for arranging disposal of the disused / decayed radiography sources and any other radioactive material in the shielding;
- (vi) keep a record of radiography exposure devices/source changers supplied, together with performance, quality assurance and safety status of the device/source changer;
- (vii) not offer for sale any X-radiography equipment or gamma radiography equipment unless authorised to do so by the Competent Authority;
- (viii) submit the periodic reports to the Competent Authority in the format prescribed by the Competent Authority;
- (ix) provide to the owner or prospective owner:
  - (a) copy of Type Approval certificate / NOC issued by the Competent Authority;
  - (b) details of the equipment to be supplied, including shielding, and operation of interlocks and shutters;
  - (c) details of source type, activity and encapsulation of gamma-radiography equipment, including copies of relevant certificates; and
  - (d) details of the X-ray generator characteristics of X-radiography equipment, including maximum tube potential difference [kV(peak)] and current (mA), or maximum X-ray energy (keV) and maximum output (dose rate).
- (x) when supplying a replacement gamma radiography source in a source container, inspect the pigtail and couplings for wear and replace unacceptably worn, frayed or damaged components;

- (xi) provide to the purchaser of a sealed radioactive source, a dummy source (clearly marked as such), and a source holder, if applicable, of the same appearance, or photographic or other documentation necessary to enable the operator to recognise an accidentally detached source, by size and appearance, in an emergency;
- (xii) assist the user for handling radiological emergencies in case any such emergency arises because of use of the radiography equipment/devices/source changers;
- (xiii) ensure the security of radiography source(s); and
- (xiv) also be responsible for facilitating the safe disposal of radiation source.

## **2) Servicing and Maintenance**

Servicing and maintenance of X-ray equipment/ accelerator/ IGRED/source changer shall be provided throughout the useful life by manufacturer/ supplier or by persons with appropriate qualification and training and certified by the Competent Authority where manufacturer/ supplier has ceased to operate. The manufacturer or supplier shall be responsible for supply of original spares and accessories.

## **3) Servicing/Maintenance Personnel**

The servicing and maintenance personnel of radiography equipment shall ensure that no repair and maintenance is carried out on radiography exposure device/source changer when it contains radiography source. After repair and maintenance, he shall test the safety of the equipment, certify its safety and enter details of repair and maintenance in a logbook. While handling the equipment with radioactive sources, he shall wear personnel monitoring devices and direct reading dosimeters. He shall use radiation monitoring instruments for ensuring safe radiation levels during work.

## **4) Transport of Radioactive Material**

Transport of radioactive material in public domain shall be in accordance with the current national / international requirements for safe transport of radioactive material, and AERB Safety Code for Transport of Radioactive Material.

## **5) Responsibilities of Radiography Contract Awarding Agency**

Radiation surveillance shall be required at a site where radiography work is carried out. The organisation awarding contract to an industrial radiography institution to conduct industrial radiography operations shall co-ordinate with radiography agencies and shall:

- (i) permit only the radiography agency that is duly authorized by AERB to work at the particular site of contractor;
- (ii) ensure that radiography personnel deployed by the radiography agency for carrying out radiography work have valid certificates to work as radiographers and RSO;
- (iii) provide adequate illumination, scaffolding and other facilities required to facilitate safe radiography work by radiography agency;

- (iv) provide safe and secure storage room as approved by AERB with round the clock effective physical security arrangements for storing radiography devices, emergency accessories and other associated equipment;
- (v) ensure that the radiography agency has emergency plans, preparedness and contact numbers in case of emergency/incidents involving radiography devices;
- (vi) ensure that any other measures required to ensure safety and security of radiography sources handled within the premises of radiography site;
- (vii) ensure that whenever authorised representatives of the Competent Authority visit the radiography site under the control of the contract awarding agency to conduct a regulatory inspection, such facilities as may be required to facilitate entry to the site without delay during any part of the day or night with or without prior notice are extended to the inspectors;
- (viii) ensure that full support is extended to the radiography agency in establishing security plan including contact nos. of concerned persons and other requirements necessary to ensure physical security of IGRED all the time; and
- (ix) assist radiography agency in ensuring safe recovery of radiography source(s), in case of theft/ loss / misplacement of IGRED.

-----