Information Pack to be Supplied to Clients- Low Dose XRF Instruments

Generic guidance on the requirements of IRR99 in relation to the use of Fischer X-ray Instruments, produced for low dose rate output instruments. It should be noted that IRR99 only applies in the UK. For sites outside the UK, local arrangements will apply.

1. Introduction

As with other instrumentation of this type, the Fischer Instrument produces ionising radiation (X-rays), and whose use must be in compliance with the requirements of regulations made under The Health & Safety At Work Act 1974, namely The Ionising Radiations Regulations 1999 (IRR 99)

These regulations and associated Approved Coe of Practice, ACOP, are available for download at the following address:

http://www.hse.gov.uk/pubns/priced/l121.pdf

In providing the Installation and Commissioning Certificate, and information on the safe use of our product, in particular, the safety features and warning devices, Fischer Instrumentation (GB) have complied with the installers duties under IRR 99.

In order to assist users in understanding their duties under IRR 99 in relation to the use of one of Fischers' X-ray instruments, we have produced this generic guidance on the key relevant requirements of the regulations.

2. Notification to the HSE (IRR Regulation 6).

Notification of those particulars given in Schedule 2 of IRR 99 is required, unless the instrument is to be used on a licensed nuclear site, or you already notified that you work with ionising radiation *and* the category of sources you use already includes electrical equipment (i.e. X-ray sets).

For those users for whom this is the first time work with ionising radiation has been done, notification must be given at least 28 days before work commences. This is done online, using the following link:

https://extranet.hse.gov.uk/lfserver/external/irr6

For those users who have previously notified work with ionising radiation, but not with X-rays, you must notify this material change forthwith, using the same form but selecting the "Change to previously notified work" check box at the start of the form.

In both cases, it is recommended that you retain a copy of the notification to help you demonstrate compliance with Regulation 6.

3. Appointment of a Radiation Protection Adviser (RPA) (Regulation 13).

As the instrument uses an accelerating potential of more than 30 KV, you must appoint a Radiation Protection Adviser in writing, and consult them on your arrangements to comply with IRR.

If you have not got ready access to an RPA, you may wish to appoint the RPA used by Fischer Instrumentation (GB) Ltd. We have appended an appointment template for your convenience.

Clients of Fischer who have purchased an XRF Unit may wish to appoint AMEC as their RPA via the attached template.

Appointing AMEC as your RPA incurs no charge, however should additional support be required, such as preparation/review of the PRA or Local Rules, provision of Radiation Awareness Training or an annual compliance Audit this will be subject to a charge.

4. Prior Risk Assessment

AMEC have prepared for Fischer, to be supplied to clients, a Prior Risk Assessment, in accordance with Regulation 7 of IRR99. This PRA has identified the persons at risk, likely radiological exposures under normal operating conditions, any potential reasonably foreseeable radiation accidents, a suitable safe system of work for the operation of the instrument and the need for suitable training to be provided.

Where instruments have a maximum external dose rate of less than 1μSv/h at 0.1m, it is not necessary to designate a Supervised Area, write Local Rules and appoint a Radiation Protection Supervisor, RPS. The reasoning behind these decisions is also summarised within the PRA.

5. Management Control and Review of Working Arrangements

Where an RPS has not been appointed, a suitable safety management system for the safe operation of the instrument is still required and should be put in place. This can be a fairly simple arrangement whereby a suitable local manager with health and safety responsibilities should assume ownership of the requirements to ensure that suitable training is provided and the safe system of work outlined in the PRA is followed.

6. Provision of Training

Regulation 14 of IRR99 requires the employers of persons who operate radiation generators to ensure that their staff should receive suitable training. This training can be fairly simple in nature, it should address the nature of the potential radiological risks associated with the operation of the instrument, the importance of following the safe system of work identified in the PRA and the actions to be taken in the event of damage to the instrument.

7. Critical Examination and Site Based Commissioning

Fischer as the erector/installer of the equipment have a duty under Reg 31(2) of IRR99 to ensure that a “Critical Examination” of the instrument is carried out as part of the on-site commissioning. Essentially the requirement is to ensure that Fischer are supplying an instrument which operates safely in line with its designed, engineered controls, all safety warning systems are operational and all essential training and operational information is provided to the client.