Report on the Third Global Survey on the Information System on Occupational Exposure in Medicine, Industry and Research-Industrial Radiography (ISEMIR-IR)

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CONTENTS

1 INTRODUCTION

The Information System on Occupational Exposure in Medicine, Industry and Research- Industrial Radiography (ISEMIR-IR), is a tool for non-destructive testing (NDT) service providers that perform industrial radiography and other industrial radiography (IR) facilities to optimize radiation protection.

ISEMIR-IR is a web-based system developed and operated by the International Atomic Energy Agency (IAEA) for regular data collection and analysis of occupational doses for individuals, working in industrial radiography. The aim of the system is to provide information which can be used to improve occupational radiation protection of workers. The tool helps IR facilities to benchmark their arrangements in radiation protection and safety against other IR facilities.

In response to the IAEA General Conference Resolution GC(66)/RES/6, requesting the Secretariat to promote ISEMIR with the aim to strengthen the safety of workers in industrial radiography and interventional cardiology, the IAEA launched a global survey on 30 October 2022 to improve the ISEMIR-IR system and to meet the needs of the users of the system, in particular NDT service providers and other IR facilities.

2 METHODS

IAEA launched the third global survey on ISEMIRS-IR in October 2022. The objectives of the survey of ISEMIR-IR were to increase the number of active users in the ISEMIR-IR system, to enhance users' experience exchange and to collect data to fill the system. The results of the first global survey, including its comprehensive analysis, have been included in the TECDOC: The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR): Industrial Radiography (IAEA-TECDOC-1747). The results of the second global survey carried out in 2020 were published on the ISEMIR-IR website: ISEMIR-IR: Industrial Radiography | IAEA.

The third global survey consisted of two questionnaires:

— questionnaire for the regulatory body.

— questionnaire for the NDT service providers.

During the consultancy meeting held on 16 - 18 May 2022, the third global survey was proposed, and two draft questionnaires were prepared.

To improve the convenience and accuracy of data collection, analysis and storage, the ability to complete the questionnaires online was offered for the first time.

With the aim to investigate the situation of NDT companies and acceptance of ISEMIR-IR in Member States, the questionnaire for the regulatory body comprised 9 main questions. This questionnaire was only available in English (see Appendix I).

The objectives of the questionnaire for NDT service providers were

- to investigate the occupational radiation protection situation and dose management information of NDT companies,
- to promote the ISEMIR-IR system, and
- to meet the needs of users, such as NDT companies.

This questionnaire comprised 19 main questions. It was available in 10 languages: Chinese, Czech, English, French, German, Japanese, Korean, Portuguese, Russian and Spanish (see Appendix II).

These questionnaires were distributed widely over an approximate three-month period (October 2022 to January 2023), primarily using IAEA contacts with regulatory bodies, the National Contact Persons (NCPs) and the registered users of ISEMIR. The IAEA Secretariat received 52 responses from regulatory bodies representing 46 countries (out of 152 countries) and 382 responses from NDT service providers from 42 countries.

In this report, the classification of region of the Member States is based on the division of the World into 4 regions, respectively Africa, Asia-Pacific, America, and Europe. This is according to the classification of the IAEA technical cooperation (TC) programme.

3 RESULTS AND ANALYSIS

3.1 Overview

The survey produced a large amount of data. This chapter will present the analysed results for the questionnaires. In many of the responses to the questionnaires for NDT service providers, not all questions were answered. In the results given in this report, "no reply" answers were excluded from the totals for that question.

The responses to the questionnaire for regulatory bodies were received from 52 regulatory bodies from 46 countries. Based on the total number of Member States of 152, this corresponds to a response rate is 30.26%. The number of completed questionnaires received from each region shown in Table 1.

Table 1. Number of completed questionnaires received from regulatory bodies

Region	Questionnaires received	Countries
Africa	9	9
Asia-Pacific	13	13
America	8	8
Europe	21	16
Global	52	46

The responses to the questionnaire for NDT service providers were received from 382 different companies from 42 different countries, representing 27.6 % of the Member States. 42.67 % (163 out of 382) of questionnaires were not fully completed. This means that some of the mandatory information for ISEMIR-IR system is missing. This comprises the information requested in questions 13 to 16. The detailed number for each region is shown in Table 2.

Table 2. Number of the questionnaires received from NDT companies

Region	Questionnaires received	Incomplete questionnaires	Countries
Africa	39	20	9
Asia-Pacific	135	59	11
America	33	13	7
Europe	175	71	15
Global	382	163	42

3.2 Results of the questionnaire on occupational radiation protection in industrial radiography addressed to regulatory bodies

The distribution of responses from Member States across the regions is given in Table 1. The detailed results for each question of the questionnaire for regulatory body will be given one after another in the following sections.

3.2.1 Number of NDT companies per country

The distribution of the number of NDT companies per country is shown in Table 3 and Figure 1.

Table 3. Responses to question 1 - How many NDT companies are there in your country?

Up to 10	10-100		more than 100	precise number
12	18		7	8

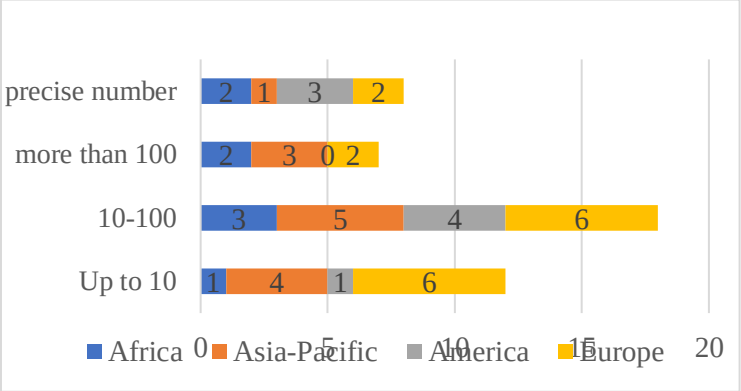


Fig.1 Responses to Question 1- How many NDT companies are there in your country?

3.2.2.Advantage of the free information system

Forty-one (41) regulatory bodies confirmed that they see advantage of a free information system for NDT companies that helps improve/optimise radiation safety for radiographers. The other 5 regulatory bodies did not see this advantage. It means that most regulatory bodies agree that creating an information system is very useful to improve/optimise radiation safety for radiographers. The distribution of the responses to the second question over the different regions is shown in Table 4.

Table 4. Responses to question 2 - Do you see the advantage of a free information system for NDT companies that helps improve/optimise radiation safety for radiographers?

	Do you see the advantage of a free information system for NDT companies that helps improve/optimise radiation safety for radiographers?		
	YES	No	No reply
Africa	8	1	0
Asia-Pacific	11	2	0
America	8	0	0
Europe	14	1	1
Global	41	4	1

3.2.3 Data collected by regulatory bodies

Almost all the regulatory bodies collect information from NDT companies on individual dose, source details and accidents / incidents. Most of the regulatory bodies also collect information on the number of radiographers and training records from NDT companies. Only a few regulatory bodies collect information on the workload of radiographers. The distribution of the responses to the third question across the different regions is shown in Table 5 and Fig.2.

Table 5. Responses to question 3 - What data do you currently collect from NDTcompanies?

	Individual dose	**Sources details**	**Accidents / incidents**	**Number of radiographers**	**RPO/ RSO or RPA/ RPS**	**Training records**	**Work load**	**Other**
Africa	6	7	6	6	6	6	1	0
Asia-Pacific	10	11	12	7	9	5	4	4
America	6	5	5	5	4	3	2	0
Europe	16	16	16	15	15	13	11	6
Global	41	44	44	33	34	27	19	10

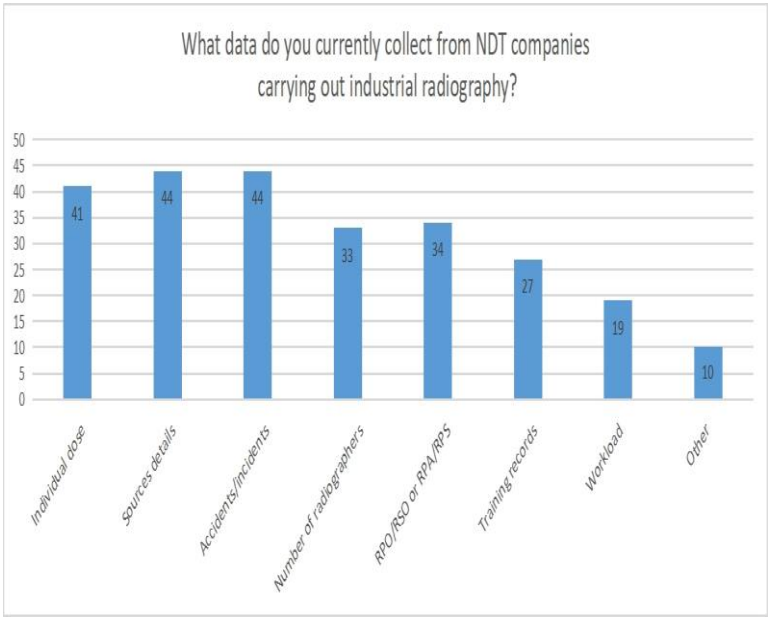


Fig.2 Responses to Question 3 – What data do you currently collect from NDT?

3.2.4 Awareness of ISEMIR-IR

About 80.4% of the regulatory bodies are aware of ISEMIR-IR. The details of the answers to question 4 are shown in Table 6 and the distribution over the regulatory bodies who are aware of ISEMIR-IR is given in Fig. 3.

Table 6. Responses to question 4 - Are you aware of the ISEMIR-IR?

	Are you aware of the ISEMIR-IR?	
	Yes	No
Africa	8	1
Asia-Pacific	10	3
America	4	4
Europe	15	1
Global	37	9

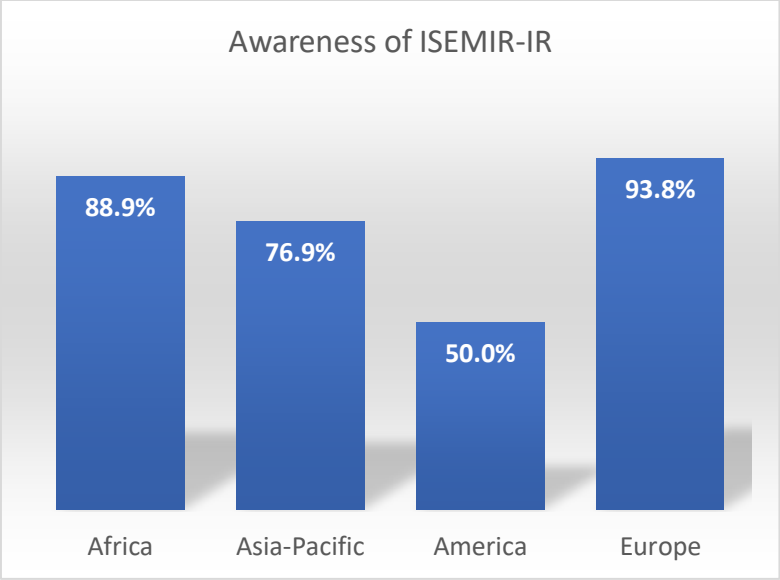


Fig. 3 Responses to Question 4 – Are you aware of the ISEMIR-IR?

3.2.5 Value of information in periodic reports

Almost all the regulatory bodies agreed that the analysis function of ISEMIR is valuable. Most of the regulatory bodies thought that the benchmarking and demographics function are of value too. Other suggestions include sharing information the lessons learned form accidents and over-exposures, quality control requirements of equipment and best practices. The details of the answers to question 5 are given in Table 7 and Fig.4.

Table 7. Responses to question 5 - What information from the ISEMIR system would be of value to you in periodic reports?

	Analysis	**Benchmarking**	**Demographics**	**Other**
Africa	9	5	3	2
Asia-Pacific	12	12	9	1
America	5	4	2	0
Europe	16	15	7	4
Global	42	36	21	7

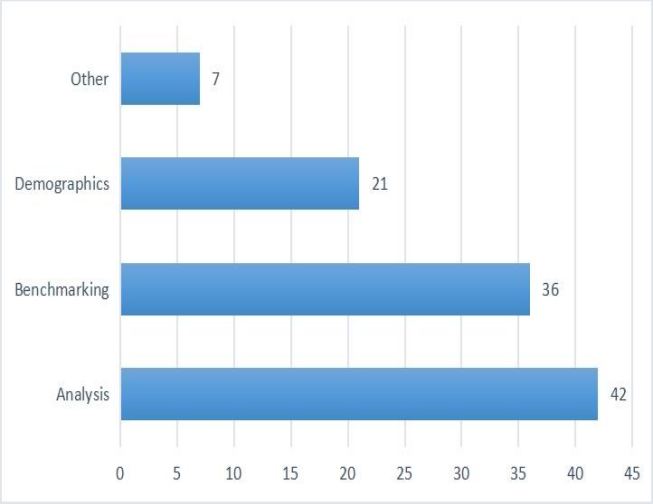


Fig.4 Responses to Question 5 - What information from the ISEMIR system would be of value to you in periodic reports**?**

3.2.6 Sharing of data

Almost all the regulatory bodies are willing to share information about accidents/incidents. Most of them will share information on individual doses, sources details and number of radiographers. Some of them are willing to share the training records and company name/code. Only 4 regulatory bodies will share the workload of the companies because only few of them collect this information, see section 3.2.3. The details of the answers to question 6 are given in Table 8 and Fig.5.

Table 8. Responses to question 6 - What kind of data are you ready to share?

	Individual dose	**Sources details**	**Accidents / incidents**	**Number of radiographers**	**Training records**	**Work-load**	**Company name/ code**	**Total**
Africa	4	4	4	5	5	2	1	25
Asia-Pacific	5	7	8	7	3	1	4	35
America	4	5	5	5	3	1	2	25
Europe	12	17	23	13	4	0	7	76
Global	25	33	40	30	15	4	14	161

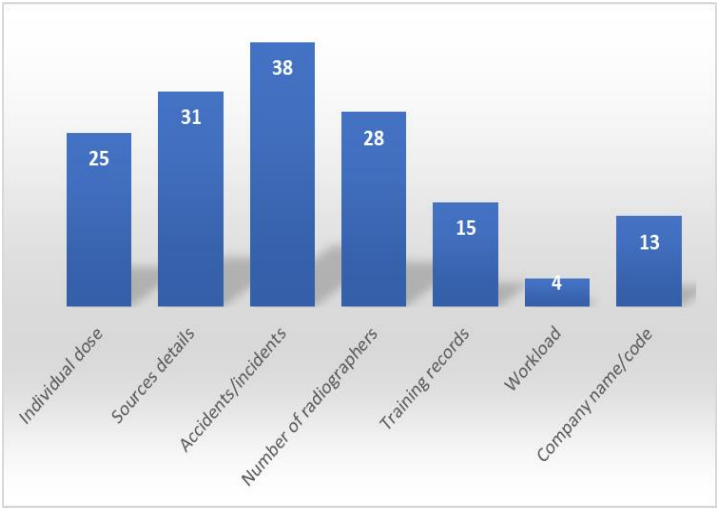


Fig.5 Responses to Question 6 - What kind of data are you ready to share?

3.3 Results of the questionnaire on occupational radiation protection in industrial radiography addressed to NDT service providers

The distribution of responses from NDT service providers across the regions is given in Table 2. The responses of the questionnaires for NDT service providers were received from 284 different companies from 42 different countries. The detailed results for each question of the questionnaire for NDT service providers are given in the following sections.

3.3.1 Recording of individual doses

Most of the NDT companies still record the individual doses of radiographers on hard copies. Some companies use commercial software, software provided by their dosimetry service company or an Excel spreadsheet to record the individual doses of radiographers. 3 companies mentioned that they do not record the individual doses of radiographers. Some companies also record the individual doses of radiographers by other ways, including national dose registers and MS Word. The details of the answers to question 1 are shown in Table 9. Apparently, some companies use different means to record the doses of their radiographers but did not provide further information.

Table 9. Responses to question 1 - By what means do you record the individual doses for your radiographers?

	Commercial software	In-house software	Software of dosimetry service company	Excel spread sheet	Hard copy	Do not record	Other	Total answered
Global	25	53	170	124	114	11	12	382

3.3.2 Type of data recorded

Almost all the NDT companies record the individual dose. Most of the companies also record the source details, information about accidents/incidents, the number of radiographers and training records.

Table 10. Responses to question 2 – What sort of data do you record?

	Individual dose	Sources details	Accidents/ incidents	Number of radiographers	Training records	Workload	Other	Total answered
Global	369	234	275	288	238	92	20	382

3.3.3 Frequency of dose recordings

About 36.5% companies update the dose records per month. 69.1% companies update the dose records quarterly. Other countries update the dose records daily, weekly, every two months or annually. The details of the answers to the question 3 are shown in Table 11 .

Table 11. Responses to question 3 – How frequently do you receive the dose records?

	Monthly	Quarterly	Other (please specify)	Total
Global	261	36	82	379

3.3.4 Data to be reported to regulatory bodies

Over 80% companies report the information about dose, sources/equipment, and accidents/incidents to the regulators. Approximately 60% companies also report the training records to the regulators. Some companies also report their radiation detection equipment, source transportations and change of radiographers and equipment to the regulators. The details of the answers to question 4 are shown in Table 12 and Fig.9.

Table 12. Responses to question 4 - What kind of data must you report to regulator?

	Dose	Training records	Sources/ equipment	Accidents/ incidents	Number of radiographers	Workload	Other	Total answered
Global	320	188	311	302	262	62	25	320

3.3.5 Interest in IAEA free software

Most of the companies (63%) are interested in IAEA free software. The details of the answers to question 5 are shown in Table 13 and Fig.10.

Table 13. Responses to question 5 - Would you be interested in IAEA free software for dose recording, analysis, and reporting?

	Yes	No	Total answered
Global	284	96	380

3.3.6 Need for particular features

All the companies that answered this question want to see the periodic dose analysis function in the IAEA software. Over 50% companies also want to see the correlation functions: dose correlated with accidents, job characteristics, workload, and training. Some companies mention about their interest in functions such as adjustable notifications, a documentation database, training, and medical examination schedules. The details of the answers to question 6 are shown in Table 14.

Table 14. Responses to question 6 - If so, are there any particular features you would like to see in the software?

	Periodic dose analysis	Correlation: dose/accidents	Correlation: dose/job characteristics	Correlation: workload/dose	Correlation: dose/training	Other particular features	Total answered
Global	226	148	145	152	107	27	265

3.3.7 Sharing of information with the IAEA

Approximately 95% companies will share their information about individual doses with the IAEA. Over 50% companies will share information about source details, accidents/incidents, number of radiographers and training records with the IAEA. About 12% companies will also share information about their workload with the IAEA. The details of the answers to question 7 are shown in Table 15.

Table 15. Responses to question 7 - What kind of data you are willing to share with IAEA?

	Dose information	Source information	Accidents/ incidents	Number of radiographers	Training records	Work-load	Other	Total Answered
Global	259	177	214	186	114	49	47	364

3.3.8. Frequency of uploading data

Approximately 43% ,41% and 15 % of the companies would be willing to update data to IAEA annually, monthly, and quarterly, respectively. A few companies would like to update their data weekly or bimonthly. The details of the answer to question 8 are shown in Table 16.

Table 16. Responses to question 8 - How often you would be willing to upload/update data?

	Annually	Monthly	Other (please specify)	Total Answered
Global	157	152	54	364

3.3.9 Means of uploading data

Approximately 50%, 36% and 26% of the companies prefer to upload data by online web-application, Excel spreadsheet and desktop application, respectively. Some companies mentioned MS Word and scanned copies for uploading data. Some companies gave more than one answer. The details of the answers to question 9 are shown in Table 17.

Table 17. Responses to question 9 - What means of uploading your data do you prefer?

	Online web-application	Excel spreadsheet	Desktop application	Other	Total Answered
Global	223	116	98	31	358

3.3.10 Awareness of ISEMIR-IR

About 30% of the NDT companies were aware of ISEMIR-IR, leaving a lot of companies who are not. The details of the answers to question 10 are shown in Table 18 and Figure 6.

Table 18. Responses to question 10 - Were you aware of the IAEA ISEMIR-IR project for NDT companies?

	Yes	No	Total
Global	86	195	281

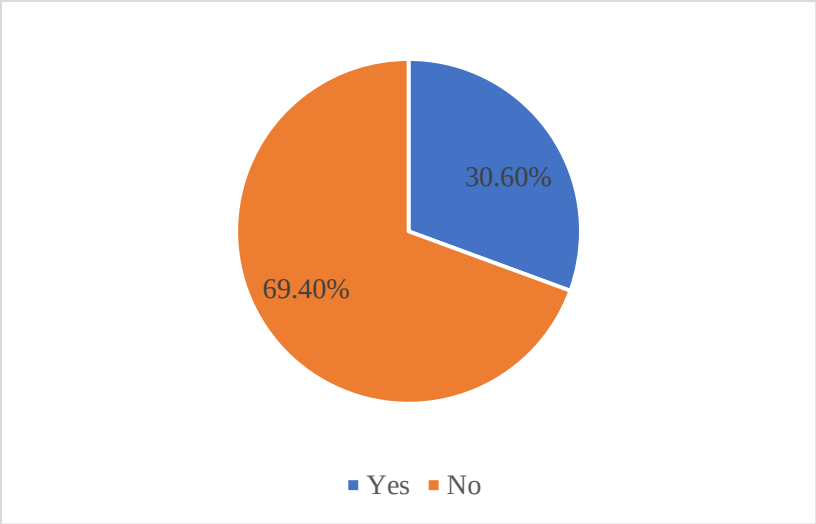


Fig. 6 Responses to Question 10 - Were you aware of the IAEA ISEMIR-IR project for NDT companies?

3.3.11 Creation of ISEMIR-IR accounts

45% of the companies would like the IAEA to create an ISEMIR-IR account for them. The details of the answers to question 11 are shown in Table 19 and Fig.7.

Table 19. Responses to question 11 - Would you like the IAEA to create ISEMIR-IR account for your company?

	Yes	No	Total
Global	136	113	249

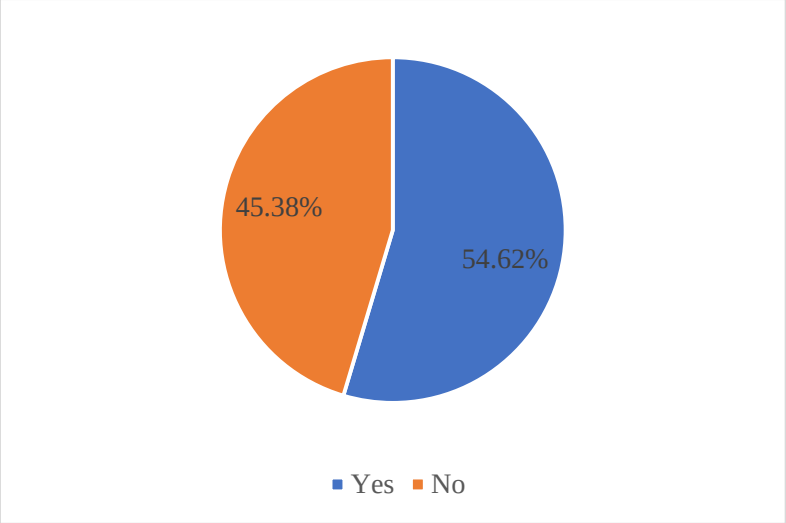


FIG.7 Responses to Question 11 - Would you like the IAEA to create ISEMIR-IR account for your company?

3.3.12 Preferred information channels

Over 51% of the companies prefer to receive information and training on ISEMIR-IR via an instruction manual. Approximately 42%, 29% and 38.6% of the companies prefer the way of webinars, on-site sessions, and newsletters, respectively. The details of the answers given to question 12 are given in Table 20 and Fig.8.

Table 20. Responses to question 12 - In what way would you like to receive information and training on ISEMIR-IR?

	Webinars	On-site sessions	Instruction manual	Newsletters	Email	Other	Total
Global	154	58	134	87	237	24	371

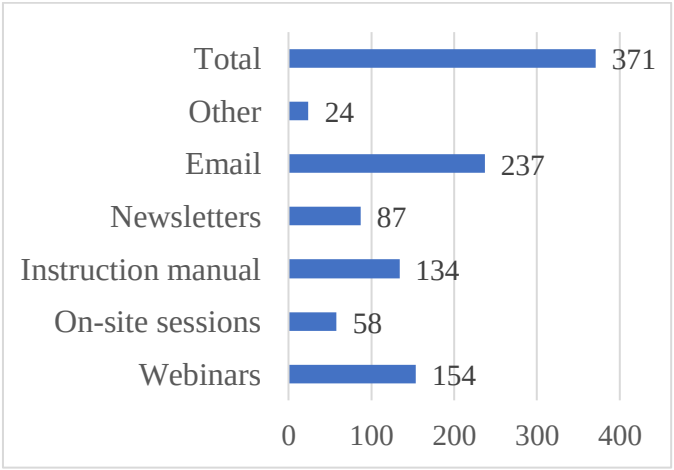


Fig. 8 Responses to Question 12 - In what way would you like to receive information and training on ISEMIR-IR?

3.3.13 Number of radioactive sources and radiation generators

The total numbers of radiography sources of the companies for the year 2020 and 2021 are presented in Table 21 and Fig.9. Over the years the number of radioactive sources and radiation sources is slightly increasing.

Table 21. Responses to question 13 - Information about the combined number of radiography source for all NDT companies that responded

Year	Number of Ir-192 radioactive sources	Number of Se-75 radioactive sources	Number of Co-60 radioactive sources	Number of units of radiation generators (X-ray units)	Total
2020	1430	178	80	1775	1215
2021	1433	173	75	1750	1300

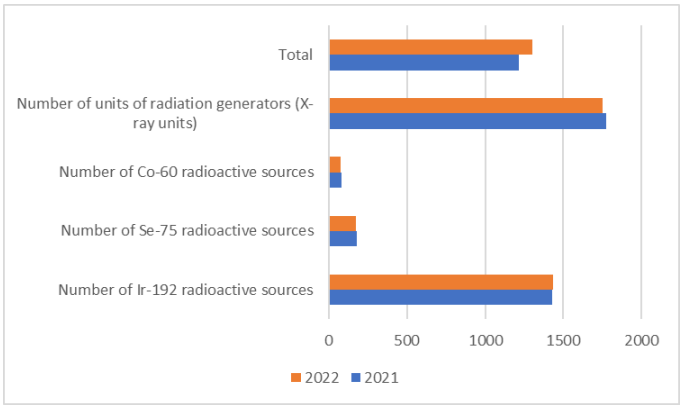


Fig. 9 Responses to Question 13 – Information about the combined number of radiography source for all NDT companies that responded.

3.3.14 Company procedures

The responses to question 14 are given in Table 22 and Fig.10.

Table 22. Responses to question 14 – Company procedures

Year	Are there company investigation levels for occupational exposure?		Does your company perform occupational radiation protection related assessment of radiographers?		Does your company perform its own inspections for compliance to radiation safety standards and regulations? (optional)	
	YES	NO	YES	NO	YES	NO
2020	245	128	331	49	295	55
2021	246	128	331	49	293	56

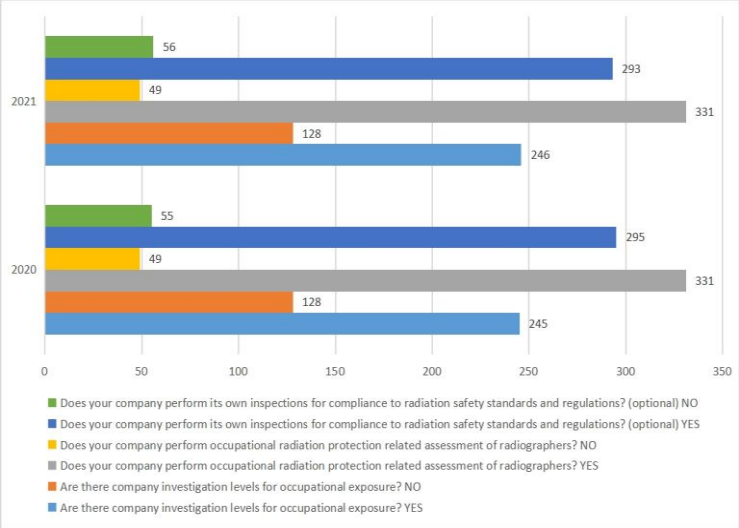


Fig. 10 Responses to Question 14 – Company procedures

3.3.15 Dose information

Most of the NDT companies (about 85%) that responded employ less than 20 occupational exposed workers. Table 23 shows the ranges of the number of occupational exposed workers per company.

Table 23. Responses to question 15.1 – Number of occupationally exposed workers per company.

Year	Number of occupationally exposed workers				
	up to 4	5 to 19	20 to 50	over 50	no reply
2020	124	134	30	14	81
2021	122	137	29	14	81

The number of films exposed in the year can be used to analysis the dose information per exposed film. This can be used as a proxy for the average dose per radiographic test, which in turn can be used as a benchmark between companies. The ranges of the number of exposed films per company are presented in Table 24. From the NDT companies that responded, companies that expose between 1,000 and 10,000 films per year form the biggest group, followed by companies that expose between 100 and 1,000 films per year.

Table 24. Responses to question 15.2 – Number of films exposed per year per company

Year	Number of films exposed in the year per company					
	up to 99	100 to 999	1000 to 9999	10000 to 50000	over 50000	no reply
2020	23	64	80	33	8	175
2021	20	65	80	34	8	175

The ranges of the annual collective dose per year per company are given in Table 25. Eleven (11) companies with an annual collective dose over 50 man.mSv/year are the same ones for both years.

Table 25. Responses to question 15.3 – Annual collective dose

Year	Annual collective dose [man.mSv/year]						
	up to 0.1	0.1 < dose ≤ 1	1 < dose ≤ 5	5 < dose ≤ 20	20 < dose ≤ 50	over 50	no reply
2020	22	45	75	42	10	11	179
2021	20	46	71	43	8	12	179

Table 26 shows the distribution of the minimum detectable level of individual dose over the companies that responded.

Table 26. Responses to question 15.4 – Distribution of minimum detectable level per company

Year	Minimum detectable level [mSv]						
	≤ 0.01	0.01 to 0.1	0.1	0.1 to 1	1	over 1	no reply
2020	23	52	67	31	8	11	81
2021	23	52	67	31	8	11	81

The numbers of workers per different dose range per region for 2020 and 2021 are given in Table 27 and Table 28 The same information is also presented in Figure 10 and Figure 11.About 92% of the workers received an annual dose less than 10 mSv, and about 43% received an annual dose less than 5 mSv.

Table 27. Responses to question 15.5 – Dose distribution information (2020)

2020								
15.5 Number of workers								
Region	Dose < min detectable level	1 mSv ≤ Dose < 5 mSv	5 mSv ≤ Dose < 10 mSv	10 mSv ≤ Dose < 15 mSv	15 mSv ≤ Dose < 20 mSv	20 mSv ≤ Dose < 30 mSv	30 mSv ≤ Dose < 50 mSv	50 mSv ≤ Dose
Africa	104	76	11	6	6	0	6	0
Asia-Pacific	262	358	13	9	0	0	0	0
America	127	177	42	8	1	1	3	0
Europe	532	660	65	0	2	4	0	0
Total	1025	1271	131	23	9	5	9	0

Table 28. Responses to question 15.5 – Dose distribution information (2021)

2021								
15.5 Number of workers								
Region	Dose < min detectable level	1 mSv ≤ Dose < 5 mSv	5 mSv ≤ Dose < 10 mSv	10 mSv ≤ Dose < 15 mSv	15 mSv ≤ Dose < 20 mSv	20 mSv ≤ Dose < 30 mSv	30 mSv ≤ Dose < 50 mSv	50 mSv ≤ Dose
Africa	144	102	11	5	6	0	5	0
Asia-Pacific	367	339	19	10	1	1	0	0

America	117	174	41	11	4	3	2	0
Europe	526	659	69	4	2	4	0	0
Global	1154	1274	140	30	13	8	7	0

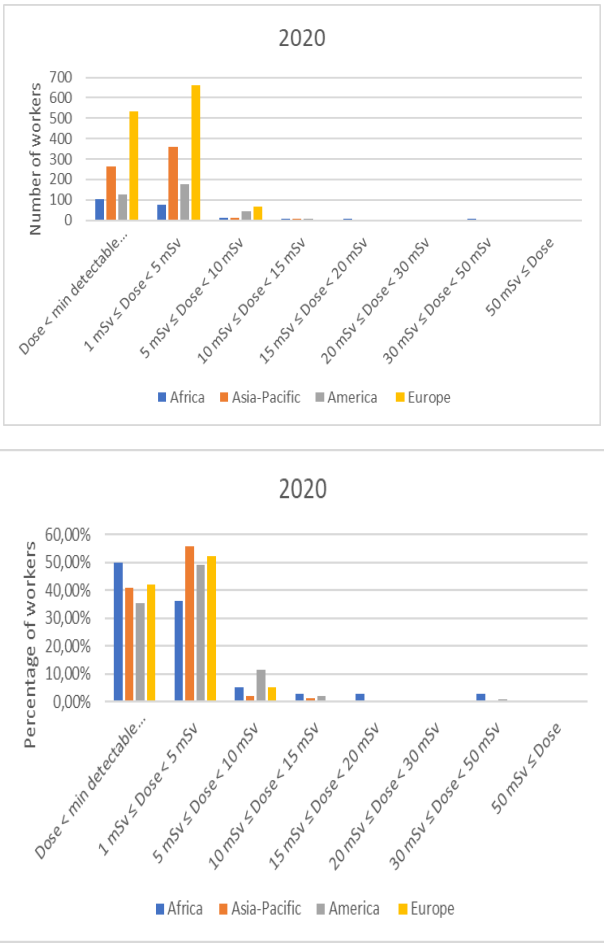
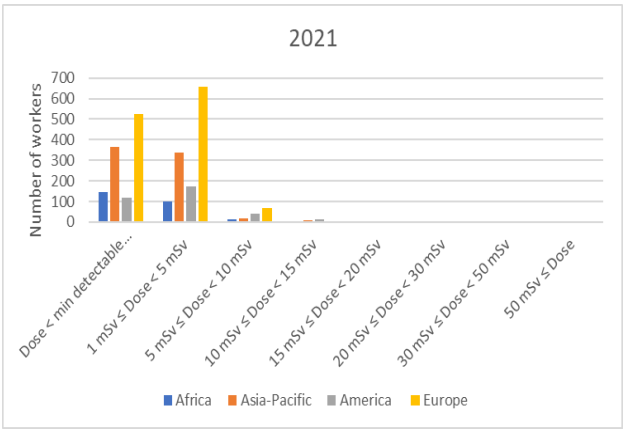


Fig. 11 Number and percentage of workers per range of individual doses per region in 2020



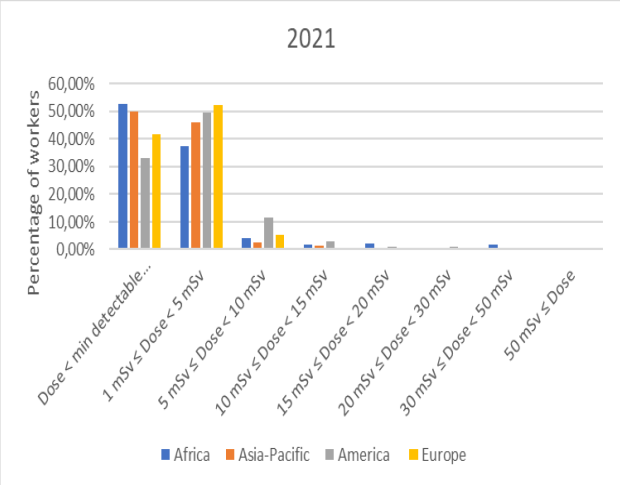


Fig. 12 Number and percentage of workers per range of individual doses per region in 2021

3.3.16 Accidents and incidents

The number of accidents and incidents reported by the companies in their responses to question 16 are given in Table29.

Table 29. Responses to question 16 – Accidents and incidents

	Number of accidents or incidents with doses ≤ 20mSv	**Number of accidents or incidents with doses > 20mSv**
2020	20	1
2021	16	7

The number of companies reported accidents and incidents are given in Table 30.

Table 30 Number of companies reported accidents and incidents

	Number of companies			
	No accident/ incident	Accidents or incidents with doses ≤ 20mSv	Accidents or incidents with doses > 20mSv	No reply
2020	249	4	1	128
2021	247	7	0	128

3.3.17 Information on radiographers

In their responses to question 17, companies reported information on three of their radiographers. This concerned information about their Hp (10) dose, the number of films they exposed in one year and their qualification. Table 31 shows the number of companies that answered questions 17 for the years 2020 and 2021. Some information about these radiographers was incomplete. We did not analyse this information in more detail but intend to include this data in the ISEMIR-IR database for the respective NDT companies that responded to this question.

Table 31. Number of companies reported information on radiographers.

	The number of companies reported information on radiographers	
	yes	No
2020	176	206
2021	181	201

4 DISCUSSION

The ISEMIR-IR global surveys are intended to understand the arrangements and practice of occupational radiation protection in industrial radiography world-wide. Industrial Radiography can be carried out safely if proper radiation protection programmes are in place. Despite this fact, accidents, and incidents did occur in the past which led to high doses to workers. Therefore, benchmarks of radiation protection programmes based on global surveys provides an opportunity for NDT companies and workers to improve their radiation protection programmes. To assist the international community, IAEA has provided guidance in SSG-11 on how industrial radiography work should be carried out safely. within the framework of the BSS and other IAEA safety standards.

The third ISEMIR-IR global survey provides information on the elements on the radiation protection programmes in place at the NDT companies that operate in the different global regions and the performance of this programmes in terms of doses received by workers and the number of accidents and incidents. The conclusion remains that radiographers still receive non-trivial doses, and that accidents and incidents still occur.

By the final deadline of 31 January 2023, 46 responses from regulatory bodies representing 43 countries were received, and 284 responses from NDT service providers or industrial radiography facilities from 42 countries. The number of Member States for which both a regulatory body and at least one company responded is 13. Thus, all respondents represent 72 Member States (out of 152) of the IAEA.

The majority of the responding regulatory bodies see the advantage of the free information system for NDT companies to help them improve/optimize radiation safety. About two third of them were already aware of ISEMIR-IR.

Almost two third of the responding NDT companies are interested in the free software provided by the IAEA. The main purpose would be to perform periodic dose analysis and to a lesser extent to analyze the correlation of dose with other parameters. Only 30% of the responding NDT companies were aware of the existence of ISEMIR-IR.

Most of the responding NDT companies still use hard copy for their registrations, followed by/combined with registrations in MS Excel and commercial software. For most companies these registrations include individual dose, source details, accidents/incidents, number of radiographers and training records. The registration of workload, e.g., in number of films exposed per year is less frequently done. This makes it more difficult to use the average individual dose per film as a benchmark for the radiation protection performance between companies.

Most of the responding NDT companies are willing to share information with the IAEA through ISEMIR-IR, and about 50% of the companies would like the IAEA to create an ISEMIR-IR account for them. This provides a strong opportunity for filling the ISEMIR-IR database with data from NDT companies.

Generally, the analysis, show that regulatory bodies, NDT companies, and workers are continuously demonstrating their willingness to work with IAEA to provide input data to ISEMIR-IR system. The responses indicated the need for having additional analytical functions in the ISEMIR-IR database.

From this the requirement to upgrade the system is evident. Such an upgrade would also need to make the system more user friendly, hence more attractive to the NDT companies.

5 CONCLUSION

The third ISEMIR-IR global survey has provided an update of the current situation regarding occupational exposure and radiation protection practices in industrial radiography. The data collected during the survey can be used to fill the ISEMIR-IR database. This will enable companies to use the related information to benchmark their performances against data of ISEMIR-IR system thus fulfilling the intended objectives. The results from this global survey reconfirm that there is a potential for improvement of the occupational radiation protection programmes currently in place at industrial radiography facilities.

The experiences of the Member States and the companies have provided useful information to determine the best course of action to develop and promote ISEMIR-IR. The experience gained so far suggest that it is worthwhile to continue distributing questionnaires to NDT companies through regulatory bodies of the members states. This will help to improve the understanding of the current situation across all IAEA Member States with respect to occupational exposure and radiation protection in industrial radiography, and promote the use of ISEMIR-IR

There appears to be a latent need for a tool like ISEMIR-IR system. Therefore, the IAEA should continue to further develop and promote it. Based on the response that About 70% of the responding NDT companies was not aware about the existence of ISEMIR-IR, it also makes sense to continue promotional activities on ISEMIR-IR. In this way both the participation as well as the quantity of data in the database can be improved thereby giving more complete and actual information on radiation protection programmes and their performance.

6 APPENDIX

Appendix I

The IAEA ISEMIR-IR Survey
(version for regulatory authority)

(to be sent to ISEMIR.Contact-Point@iaea.org)

1. How many NDT companies are there in your country?

- o Precise number _____
- o Up to 4
- o more than 5

2. Do you see the advantage of a free information system for NDT companies that helps improve/optimise radiation safety for radiographers?

- o Yes
- o No

3. What data do you currently collect from NDT companies?

- ☐ Individual dose;
- ☐ Sources details;
- ☐ Accidents/incidents;
- ☐ Number of radiographers;
- ☐ Training records;
- ☐ Workload (for example: films/year)
- ☐ Other (please specify) _____

4. Are you aware of the ISEMIR-IR?

- o Yes
- o No

5. What information from the ISEMIR system would be of value to you in periodic reports?

- ☐ Analysis;
- ☐ Benchmarking;
- ☐ Demographics;
- ☐ Other (please specify) _____

6. What kind of data are you ready to share?*

- ☐ Individual dose;
- ☐ Sources details;
- ☐ Accidents/incidents;
- ☐ Number of radiographers;
- ☐ Training records;
- ☐ Workload (for example: films/year)
- ☐ Company name/code (not displayed in published statistics)

7. Would you be willing to share the contacts of persons who should complete this or companies' questionnaire?

Company name	**Name of responsible person**	E-mail address

8. Your personal information*

Name and Surname

Job title or position

E-mail:

Regulatory Authority

Town/city

Country

* All information will be treated as strictly confidential by the IAEA.

Appendix II

English Version:

The IAEA ISEMIR-IR Survey
(version for NDT service providers)

(to be sent to ISEMIR.Contact-Point@iaea.org)

All information will be treated as strictly confidential by the IAEA. Only anonymised and aggregated data will be made available.

1. By what means do you record the individual doses for your radiographers?

☐ Commercial software;
☐ In-house software;
☐ Software of dosimetry service company;
☐ Excel spreadsheet;
☐ Hard copy;
☐ We do not record;
☐ Other (please specify) :_____

2. What sort of data do you record?

☐ Individual dose;
☐ Sources details;
☐ Accidents/incidents;
☐ Number of radiographers;
☐ Training records;
☐ Workload (for example: films/year)
☐ Other (please specify) :_____

3. How frequently do you receive the dose records?

☐ Monthly;
☐ Quarterly;
☐ Other (please specify):_____

4. What kind of data must you report to regulator?

☐ Dose;
☐ Training;
☐ Sources/equipment
☐ Accidents/incidents
☐ Number of radiographers
☐ Workload (for example: films/year)
☐ Other (please specify) :_____

5. Would you be interested in IAEA free software for dose recording, analysis and reporting?

- Yes
- No

if no, please explain_____

6. If yes, are there any particular features you would like to see in the software?

☐ Periodic dose analysis;
☐ Correlation: dose/accidents;
☐ Correlation: dose/job characteristics;
☐ Correlation: workload/dose;
☐ Correlation: dose/training;
☐ Other particular features (please specify)_____

7. What kind of data are you willing to share with IAEA?

☐ dose information;
☐ Source information;
☐ Accidents/incidents;
☐ Number of radiographers;
☐ Training records;
☐ Workload (for example: films/year)

☐ Other (please specify) :_____

8. How often you would be willing to upload/update data?

☐ Annually;
☐ Monthly;
☐ Other (please specify) :_____

9. What means of uploading your data do you prefer?

☐ Online web-application;
☐ Excel spreadsheet;
☐ Desktop application;
☐ Other (please specify) :_____

10. Were you aware of the IAEA ISEMIR-IR project for NDT companies before?

o Yes
o No

11. Would you like the IAEA to create ISEMIR-IR account for your company?

o Yes
o No

12. In what way would you like to receive information and training on ISEMIR-IR?

☐ Webinars;
☐ On-site sessions;
☐ Instruction manual;
☐ Newsletters

☐ E-mails

☐ Other (please specify) :_____

13-17. Please give some details on your company in the questionnaire below (All information will be treated as strictly confidential by the IAEA)

Question	Year	
	2020	2021
13. Radiography sources		
13.1 Number of Ir-192 radioactive sources	number of sources	number of sources
13.1a Typical Initial activity of Ir-192 source (optional) (TBq)	GBq	GBq
13.1b Maximum energy of Ir-192 source(optional) (TBq)	TBq	TBq
13.2 Number of Se-75 radioactive sources	number of sources	number of sources
13.2a Typical Initial activity of Se-75 source (optional) (TBq)	GBq	GBq
13.2b Maximum energy of Se-75 source(optional) (TBq)	GBq	GBq
13.3 Number of Co-60 radioactive sources	number of sources	number of sources
13.3a Typical Initial activity of Co-60 source(optional) (TBq)	GBq	GBq
13.3b Maximum energy of Co-60 source(optional) (TBq)	GBq	GBq
13.4 Number of units of radiation generators (X-ray units)	number of units	number of units
13.4a Typical MV of radiation generator (X-ray units) (optional)	MV	MV
13.4b Typical mA of radiation generator (X-ray units) (optional)	mA	mA
14. Company procedures		
14.1 Are there company investigation levels for occupational exposure?	☐ Yes ☐ No	
14.1a. If yes, what is the investigation level ?	mSv	mSv
14.1b. What is the time period of the investigation level:		
14.2 Does your company perform occupational radiation protection related assessment of radiographers?	☐ Yes ☐ No	

Question	Year	
	2020	2021
14.2a If yes, approximately how many times per year would a radiographer be assessed by your company?	number of times per year	number of times per year
14.3 Does your company perform its own inspections for compliance to radiation safety standards and regulations?	☐ Yes ☐ No	
14.3a If yes, how many compliance inspections were held in a year?	number of inspections	number of inspections
15. Dose information		
15.1 Number of Occupationally Exposed Workers	number of workers	number of workers
15.2 Number of films exposed in the year	number of films	number of films
15.3 Annual collective dose (man.mSv/year)	man.mSv/year	man.mSv/year
15.4 Minimum detectable level(provided by dosimetry laboratory)	mSv	mSv
15.5 Please indicate number of workers in dose ranges:		
Annual Dose < min detectable level	number of workers	number of workers
min detectable level ≤ Annual Dose < 1 mSv	number of workers	number of workers
1 mSv ≤ Annual Dose < 5 mSv	number of workers	number of workers
5 mSv ≤ Annual Dose < 10 mSv	number of workers	number of workers
10 mSv ≤ Annual Dose < 15 mSv	number of workers	number of workers
15 mSv ≤ Annual Dose < 20 mSv	number of workers	number of workers
20 mSv ≤ Annual Dose < 30 mSv	number of workers	number of workers
30 mSv ≤ Annual Dose < 50 mSv	number of workers	number of workers
50 mSv ≤ Annual Dose	number of workers	number of workers

Question	Year	
	2020	2021
16. Accidents and incidents		
16.1 Number of accidents or incidents with doses ≤ 20mSv	number of accidents/incidents	number of accidents/incidents
16.2 Number of accidents or incidents with doses > 20mSv	number of accidents/incidents	number of accidents/incidents
17. Information on radiographers(optional)		
sample radiographer I		
17.1 Annual dose (Hp(10))	mSv	mSv
17.1a Number of radiographic films exposed in a year	Number of films	Number of films
17.1b Does the radiographer have valid radiation protection qualification?	Yes/No	Yes/No
sample radiographer II		
17.2 Annual dose (Hp(10))	mSv	mSv
17.2a Number of radiographic films exposed in a year	Number of films	Number of films
17.2b Does the radiographer have valid radiation protection qualification?	Yes/No	Yes/No
sample radiographer III		
17.3 Annual dose (Hp(10))	mSv	mSv
17.3a Number of radiographic films exposed in a year	Number of films	Number of films
17.3b Does the radiographer have valid radiation protection qualification?	Yes/No	Yes/No

18. Your personal information

Name and Surname	Company/Institution
Job title or position	Town/city
E-mail	Country

Date：

19. I agree to have the data from the questionnaire (questions 13-18) added to the IAEA ISEMIR-IR database by the IAEA

☐ Yes ☐ No signature

Chinese Version:

1. **您通**过什么方式记录探伤作业人员的个人剂量？

☐ **商**业软件；

☐ **个人**剂量监测服务公司的软件；

☐ Excel 电子表格；

☐ 纸质文档；

☐ **不**记录；

☐ **其它方式**(请注明) _____

2. **您都**记录哪些数据？

☐ **个人**剂量；

☐ 辐射源信息；

☐ **事故/事件**；

☐ **探**伤作业人员数量；

☐ **培**训记录；

☐ **工作量 (例如： 每年曝光多少胶片)**

☐ **其它**(请注明) _____

3. **您多久更新一次**剂量记录？

☐ **一个月**

☐ **一个季度**

☐ **其它**(请注明) _____

4. **哪些数据是必**须向监管机构汇报的？

☐ 剂量；

☐ **培**训；

☐ 辐射源/设备；

☐ **事故/事件**；

☐ **其它**(请注明) _____

5. **你是否有**兴趣使用 IAEA **的免**费软件来进行剂量记录、分析和汇报？

是

否

6. **如果是，你是否希望在**软件中看到以下任何特定的功能？

☐ 定期剂量分析；

☐ 相关性分析：剂量/事故；

☐ 相关性分析：剂量/工作特征；

☐ 相关性分析：工作量/剂量；

☐ 相关性分析：剂量/培训；

☐ 其它特定功能 (请注明)_____

7. 您准备与国际原子能机构分享什么样的数据？

☐ 个人剂量；

☐ 辐射源信息；

☐ 事故/事件；

☐探伤作业人员数量；

☐ 培训记录；

☐ 工作量 (例如： 每年曝光多少胶片)

☐ 其它(请注明) _____

8. 您愿意多久上传/更新一次数据？

☐ 一年；

☐ 一个月

☐ 其它(请注明) _____

9. 您喜欢哪种方式上传数据？

☐ 在线网络应用程序；

☐ Excel 电子表格；

☐ 桌面应用程序；

☐ 其它(请注明) _____

10. 您之前是否知道针对无损检测公司的 IAEA ISEMIR-IR 项目？

是

否

11. 您是否希望国际原子能机构为贵公司创建 ISEMIR-IR 账号？

是

否

12. 您喜欢以下哪种方式来获得有关 ISEMIR-IR 的信息和培训？

☐ 网络研讨会；

☐ 现场会议；

☐ **使用**说明书；

☐ **新**闻通讯;

☐电子邮件；

☐ **其它**(请注明) _____

请在下面的调查表中提供贵公司的一些详细信息(**国**际原子能机构将对所有信息严格保密)

问题	**年份**	
	2020	2021
13. 射线探伤辐射**源**		
13.1 Ir-192 **放射源的数量**		
13.1a Ir-192 **出厂**时的典型活度值(选填)	TBq	TBq
13.1b Ir-192 **的最高能量**(选填)	TBq	TBq
13.2 Se-75 **放射源的数量**		
13.2a Se-75 **出厂**时的典型活度值(选填)	TBq	TBq
13.2b Se-75**的最高能量**(选填)	TBq	TBq
13.3 Co-60 **放射源**		
13.3a Co-60 **出厂**时的典型活度值(选填)	TBq	TBq
13.3b Co-60 **的最高能量**(选填)	TBq	TBq
13.4 **射**线发生器的数量 (X **射**线装置)		
13.4a **射**线发生器的典型值 MV (X **射**线装置) (选填)	MV	MV
13.4b **射**线发生器的典型值 mA (X **射**线装置) (选填)	mA	mA
14. **公司程序**		

问题	年份	
	2020	2021
14.1 **贵公司是否有**针对职业照射的调查水平？	☐ **是** ☐ **否**	
14.1a. **如果是**，调查水平是多少？	mSv	mSv
14.1b. 该调查水平对应的调查时间是多久?		
14.2 贵公司是否对探伤从业人员进行职业辐射防护相关的评估？	☐ **是** ☐ **否**	
14.2a **如果是**，贵公司每年会对探伤从业人员进行大约多少次评估？		
14.3 贵公司是否对自己进行检查以确认**是否符合**辐射安全标准和规定？(选填)	☐ **是** ☐ **否**	
14.3 **如果是**，**每年**进行几次相关的检查？(选填)		
15. 剂量信息		
15.1 职业照射工作人员的数量		
15.2 每年曝光的胶片数量		
15.3 年集体剂量	man.mSv/year	man.mSv/year
15.4 最小可探测水平	mSv	mSv
15.5 请指出剂量范围内的工作人员数量:		
年剂量 <最小可探测水平		
最小可探测水平≤年剂量< 1 mSv		
1 mSv ≤年剂量< 5 mSv		

问题	年份	
	2020	2021
5 mSv ≤年剂量< 10 mSv		
10 mSv ≤年剂量< 15 mSv		
15 mSv ≤年剂量< 20 mSv		
20 mSv ≤年剂量< 30 mSv		
30 mSv ≤年剂量< 50 mSv		
50 mSv ≤年剂量		
16.事故和事件		
16.1 事故或事件的数量 剂量 ≤ 20mSv		
16.2 事故或事件的数量 剂量 > 20mSv		
17. 探伤从业人员信息 (选填)		
有代表性的探伤从业人员 I		
17.1 个人剂量当量 Hp (10)	mSv	mSv
17.1a 每年曝光的胶片数量		
17.1b 他/她是否有有效的辐射防护资质 (选填)？		
有代表性的探伤从业人员 II		
17.2 个人剂量当量 Hp (10)	mSv	mSv
17.2a 每年曝光的胶片数量		

问题	年份	
	2020	2021
17.2b 他/她是否有有效的辐射防护资质(选填)？		
有代表性的探伤从业人员 III		
17.3 个人剂量当量 Hp (10)	mSv	mSv
17.3a 每年曝光的胶片数量		
17.3b 他/她是否有有效的辐射防护资质(选填)？		

17. **您的个人信息**

姓名 **公司/机构**

职称或职位 **城镇/城市**

电子邮件: **国家**

18. **我同意把**调查表中的数据(问题 13-17)**用于** IAEA ISEMIR-IR **数据**库* 签字：

* **国**际原子能机构将对所有的信息进行严格地保密。只提供匿名和汇总后的数据。

Portuguese Version:

Pesquisa IAEA ISEMIR-IR
(versão para Empresas de END)

(enviar para ISEMIR.Contact-Point@iaea.org)

1. Por quais meios você registra as doses individuais de seus operadores?

☐ Programa computacional comercial;
☐ Programa computacional do laboratório de dosimetria;
☐ Planilha Excel;
☐ Documento impresso;
☐ Não registro;
☐ Outros (favor especificar) _____

2. Que tipo de dados você registra?

☐ Dose individual;
☐ Detalhes de fontes;
☐ Acidentes/incidentes;
☐ Números de operadores;
☐ Registros de treinamento;
☐ Carga de trabalho (por exemplo: número de filmes radiográficos/ano)
☐ Outros (favor especificar) _____

3. Com que frequência você atualiza os registros de dose?

☐ Mensal;
☐ Trimestral;
☐ Outros (favor especificar)_____

4. Que tipo de dados você deve informar a Autoridade Reguladora?

☐ Dose;
☐ Treinamento;
☐ Fontes/equipamentos;
☐ Acidentes/incidentes;
☐ Outros (favor especificar)_____

5. Você estaria interessado no software gratuito da IAEA para registro, análise e relatório de doses?

- Sim
- Não

6. Em caso afirmativo, há algum recurso específico que você gostaria de ver no software?

☐ Análise periódica de dose;
☐ Correlação: dose/acidente;
☐ Correlação: dose/características de trabalho;
☐ Correlação: carga de trabalho/dose;

☐ Correlação: dose/treinamento;
☐ Outro recurso particular (favor especificar)_____

7. Que tipo de dados você pode compartilhar com a IAEA?

☐ Dose individual;
☐ Detalhes de fontes;
☐ Acidentes/incidentes;
☐ Números de operadores;
☐ Registros de treinamento;
☐ Carga de trabalho (por exemplo: número de filmes radiográficos/ano)
☐ Outros (favor especificar) _____

8. Com que frequência você estaria disposto a fazer envio/atualização dos dados?

☐ Anual;
☐ Mensal;
☐ Outros (favor especificar)_____

9. Que meios de envio de seus dados você prefere?

☐ Aplicativo online na web;
☐ Planilha Excel;
☐ Aplicativo em Desktop;
☐ Outros (favor especificar)_____

10. Você está ciente do projeto IAEA ISEMIR-IR para Empresas de END?

o Sim
o Não

11. Você gostaria de criar uma conta de cadastro para sua Empresa no ISEMIR-IR da IAEA?

o Sim
o Não

12. De que forma gostaria de receber informações e treinamentos do ISEMIR-IR?

☐ Seminários na web (Webinars);
☐ Sessões no próprio site (On-site sessions);
☐ Manual de Instrução;
☐ Boetins informativos (Newsletters);
☐ E-mial;
☐ Outros (favor especificar) _____

Favor forneça alguns detalhes sobre sua Empresa no questionário abaixo (Todas as informações serão tratadas como estritamente confidenciais pela IAEA)

Questão	Ano	
	2020	2021
13. Fontes de Radiografia		

Questão	Ano	
	2020	2021
13.1 Número de fontes radioativas de Ir-192	número de fontes	número de fontes
13.1a Atividade inicial típica de fonte de Ir-192 (opcional)	TBq	TBq
13.1b Energia máxima de Ir-192 (opcional)	TBq	TBq
13.2 Número de fontes radioativas de Se-75	número de fontes	número de fontes
13.2a Atividade inicial típica de fonte de Se-75 (opcional)	TBq	TBq
13.2b Energia máxima de Se-75 (opcional)	TBq	TBq
13.3 Número de fontes radioativas de Co-60	número de fontes	número de fontes
13.3a Atividade inicial típica de fonte de Co-60 (opcional)	TBq	TBq
13.3b Energia máxima de Co-60 (opcional)	TBq	TBq
13.4 Número de equipamentos geradores de radiação (unidades de raios X)	número de unidades	número de unidades
13.4a Energia típica MV do gerador de radiação (unidade de raios X) (opcional)	MV	MV
13.4b Corrente típica mA do gerador de radiação (unidade de raios X) (opcional)	mA	mA
14. Procedimentos da Empresa		
14.1 Existem níveis de investigação da empresa para exposição ocupacional?	☐ Sim ☐ Não	
14.1a. Se sim, qual é o nível de investigação por mês?	mSv	mSv
14.2 Sua Empresa realiza avaliações relacionadas a	☐ Sim ☐ Não	

Questão	Ano	
	2020	2021
proteção radiológica dos operadores?		
14.2a Se sim, aproximadamente quantas vezes por ano um operador seria avaliado por sua Empresa?	número de vezes por ano	número de vezes por ano
14.3 Sua Empresa realiza suas próprias inspeções de conformidade com as recomendações e regulamentos de proteção radiológica? (opcional)	☐ Sim ☐ Não	
14.3 Se sim, quantas inspeções de conformidades foram realizadas no ano? (opcional)	número de inspeções	número de inspeções
15. Informação de dose		
15.1 Número de trabalhadores ocupacionalmente expostos (IOE)	número de trabalhadores	número de trabalhadores
15.2 Número de filmes radiográficos expostos no ano	número de filmes	número de filmes
15.3 Dose coletiva anual	homem.mSv/ano	homem.mSv/ano
15.4 Valor mínimo detetável da dosimetria	mSv	mSv
15.5 Favor, indique o Número de Trabalhadores nos intervalos de doses:		
Dose Anual < valor mínimo detetável	número de trabalhadores	número de trabalhadores
valor mínimo detetável ≤Dose Anual < 1mSv	número de trabalhadores	número de trabalhadores
1 mSv ≤ Dose Anual < 5 mSv	número de trabalhadores	número de trabalhadores
5 mSv ≤ Dose Anual < 10 mSv	número de trabalhadores	número de trabalhadores
10 mSv ≤ Dose Anual < 15 mSv	número de trabalhadores	número de trabalhadores
15 mSv ≤	número de trabalhadores	número de trabalhadores

Questão	Ano	
	2020	2021
Dose Anual < 20 mSv		
20 mSv ≤ Annual Dose < 30 mSv	número de trabalhadores	número de trabalhadores
30 mSv ≤ Dose Anual < 50 mSv	número de trabalhadores	número de trabalhadores
50 mSv ≤ Dose Anual	número de trabalhadores	número de trabalhadores
16. Acidentes e incidentes		
16.1 Número de acidentes ou incidentes com doses ≤ 20mSv	número de acidentes/incidentes	número de acidentes/incidentes
16.2 Número de acidentes ou incidentes com doses > 20mSv	número de acidentes/incidentes	número de acidentes/incidentes
17. Informação dos operadores (opcional)		
Operador representativo I		
17.1 Dose anual Hp (10)	mSv	mSv
17.1a Número de filmes radiográficos no ano	número de filmes	número de filmes
17.1b Possui qualificação válida em proteção radiológica? (opcional)	Sim/Não	Sim/Não
Representative radiographer II		
17.2 Dose anual Hp (10)	mSv	mSv
17.2a Número de filmes radiográficos no ano	número de filmes	número de filmes
17.2b Possui qualificação válida em proteção radiológica? (opcional)	Sim/Não	Sim/Não
Representative radiographer III		
17.3 Dose anual Hp (10)	mSv	mSv
17.3a Número de filmes radiográficos no ano	número de filmes	número de filmes
17.3b Possui qualificação válida em proteção radiológica? (opcional)	Sim/Não	Sim/Não

17. Suas informações pessoais

Nome e Sobrenome	Empresa/Instituição
Cargo ou posição	Cidade/Estado
E-mail:	País

18. Eu concordo em incluir os dados do questionário (questões 13-17) no banco de dados ISEMIR-IR da IAEA*	assinatura

* Todas as informações serão tratadas como estritamente confidenciais pela IAEA. Apenas dados anônimos e agregados serão disponibilizados.

Spanish Version

1. ¿Qué medios utiliza para registrar las dosis individuales de sus operadores?

☐ Software comercial;
☐ Software del laboratorio de dosimetría;
☐ Hoja de cálculo de Excel;
☐ Documento impreso;
☐ No las registro;
☐ Otro (por favor especifique) _____

2. ¿Qué tipo de datos registra?

☐ Dosis individual;
☐ Detalles de la fuente;
☐ Accidentes/incidentes;
☐ Número de operadores;
☐ Registro de entrenamientos;
☐ Carga de trabajo (por ejemplo: número de películas/año)；
☐ Otro (por favor especifique) _____

3. ¿Con qué frecuencia actualiza los registros de dosis?

☐ Mensual;
☐ Trimestral;
☐ Otro (por favor especifique)_____

4. ¿Qué tipo de datos debe informar a la Autoridad Reguladora?

☐ Dosis;
☐ Entrenamiento;
☐ Fuentes/equipos
☐ Accidentes/incidentes;
☐ Otro (por favor especifique)_____

5. ¿Le interesaría el software gratuito del OIEA para el registro, análisis y notificación de las dosis?

o Sí
o No

6. Si la respuesta anterior es afirmativa, ¿hay alguna característica particular que le gustaría ver en el software?

☐ Análisis periódico de dosis;
☐ Correlación: dosis/accidentes;
☐ Correlación: dosis/características del trabajo;
☐ Correlación: carga de trabajo/dosis;
☐ Correlación: dosis/entrenamiento;
☐ Otras características particulares (por favor especifique)_____

7. ¿Qué tipos de datos está dispuesto a compartir con el OIEA?

☐ Dosis individual;
☐ Detalles de la fuente;
☐ Accidentes/incidentes;
☐ Número de operadores;
☐ Registro de entrenamiento;
☐ Carga de trabajo (por ejemplo: número de películas/año);
☐ Otro (por favor especifique) _____

8. ¿Con qué frecuencia estaría dispuesto a cargar/actualizar los datos?

☐ Anualmente;
☐ Mensual;
☐ Otro (por favor especifique)_____

9. ¿Qué medios prefiere para cargar sus datos?

☐ Aplicación web online;
☐ Hoja de cálculo de Excel;
☐ Aplicación para el escritorio;
☐ Otro (por favor especifique)_____

10. ¿Conoce el proyecto ISEMIR-IR del OIEA para Empresas de END?

- Sí
- No

11. ¿Le gustaría que el OIEA creara una cuenta ISEMIR-IR para su Empresa?

- Sí
- No

12. ¿De qué forma le gustaría recibir información y entrenamiento sobre ISEMIR-IR?

☐ Seminarios en la web (Webinars);
☐ Sesiones in-situ (On-site sessions);
☐ Manual de instrucciones;
☐ Boletines (Newsletters);
☐ E-mail;
☐ Otro (por favor especifique) _____

Por favor, proporcione algunos detalles sobre su Empresa en el cuestionario a continuación (El OIEA tratará toda la información como estrictamente confidencial).

Preguntas	Año	
	2020	2021
13. Fuentes de Radiografía		
13.1 Número de fuentes radiactivas de Ir-192	Número de fuentes	Número de fuentes

Preguntas	Año	
	2020	2021
13.1a Actividad típica inicial de la fuente de Ir-192 (opcional)	TBq	TBq
13.1b Energía máxima de Ir-192 (opcional)	TBq	TBq
13.2 Número de fuentes radiactivas de Se-75	Número de fuentes	Número de fuentes
13.2a Actividad típica inicial de la fuente de Se-75 (opcional)	TBq	TBq
13.2b Energía máxima de Se-75 (opcional)	TBq	TBq
13.3 Número de fuentes radioactivas de Co-60	Número de fuentes	Número de fuentes
13.3a Energía máxima de Co-60 (opcional)	TBq	TBq
13.3b Actividad típica final de la fuente de Co-60 (opcional)	TBq	TBq
13.4 Número de equipos generadores de radiación (rayos X)	Número de equipos	Número de equipos
13.4a Energía típica MV de equipos generadores de radiación (rayos X) (opcional)	MV	MV
13.4b Corriente típica (mA) de equipos generadores de radiación (rayos X) (opcional)	mA	mA
14. Procedimientos de la Empresa		
14.1 ¿Existen niveles de investigación para exposición ocupacional en la empresa?	☐ Sí ☐ No	
14.1a. Si es la respuesta anterior es afirmativa, ¿cuál es el nivel mensual de investigación?	mSv	mSv
14.2 ¿Su Empresa realiza evaluaciones relacionadas con la protección radiológica ocupacional de los operadores?	☐ Sí ☐ No	
14.2a Si la respuesta anterior es afirmativa, ¿cuántas veces al año,	Número de veces por año	Número de veces por año

Preguntas	Año	
	2020	2021
aproximadamente, su Empresa evalúa a un operador?		
14.3 ¿Su empresa realiza sus propias inspecciones para verificar el cumplimiento de las normas y regulaciones de seguridad radiológica? (opcional)	☐ Sí ☐ No	
14.3 Si la respuesta anterior es afirmativa, ¿cuántas inspecciones para verificar el cumplimiento se realizaron en un año? (opcional)	Número de inspecciones	Número de inspecciones
15. Información de dosis		
15.1 Número de trabajadores ocupacionalmente expuestos.	Número de trabajadores	Número de trabajadores
15.2 Número de películas expuestas en un año	Número de películas	Número de películas
15.3 Dosis colectiva anual	mSv hombre/año	mSv hombre/año
15.4 Valor mínimo detectable de la dosimetría	mSv	mSv
15.5 Por favor, indique el número de trabajadores por rangos de dosis:		
Dosis Anual < valor mínimo detectable	Número de trabajadores	Número de trabajadores
valor mínimo detectable ≤ Dosis Anual < 1 mSv	Número de trabajadores	Número de trabajadores
1 mSv ≤ Dosis Anual < 5 mSv	Número de trabajadores	Número de trabajadores
5 mSv ≤ Dosis Anual < 10 mSv	Número de trabajadores	Número de trabajadores
10 mSv ≤ Dosis Anual < 15 mSv	Número de trabajadores	Número de trabajadores

Preguntas	Año	
	2020	2021
15 mSv ≤ Dosis Anual < 20 mSv	Número de trabajadores	Número de trabajadores
20 mSv ≤ Dosis Anual < 30 mSv	Número de trabajadores	Número de trabajadores
30 mSv ≤ Dosis Anual < 50 mSv	Número de trabajadores	Número de trabajadores
50 mSv ≤ Dosis Anual	Número de trabajadores	Número de trabajadores
16. Accidentes e incidentes		
16.1 Número de accidentes o incidentes con dosis ≤ 20mSv	Número de accidentes/incidentes	Número de accidentes/incidentes
16.2 Número de accidentes o incidentes con dosis > 20mSv	Número de accidentes/incidentes	Número de accidentes/incidentes
17. Información de los operadores (opcional)		
Operador representativo I		
17.1 Dosis anual Hp (10)	mSv	mSv
17.1a Número de películas en un año	Número de películas	Número de películas
17.1b ¿El (la) operador(a) tiene una certificación válida en protección radiológica? (opcional)	Sí/No	Sí/No
Operador representativo II		
17.2 Dosis anual Hp (10)	mSv	mSv
17.2a Número de películas en un año	Número de películas	Número de películas
17.2b ¿El (la) operador(a) tiene una certificación válida en protección radiológica? (opcional)	Sí/No	Sí/No
Operador representativo III		
17.3 Dosis anual Hp (10)	mSv	mSv

Preguntas	Año	
	2020	2021
17.3a Número de películas en un año	Número de películas	Número de películas
17.3b ¿El (la) operador(a) tiene una certificación válida en protección radiológica? (opcional)	Sí/No	Sí/No

17. Su información personal

Nombre y Apellido	Empresa/Institución
Puesto de trabajo o cargo	Ciudad/Estado
E-mail:	País

18. Acepto incluir los datos del cuestionario (preguntas 13 a 17) en la base de datos ISEMIR-IR del OIEA*	firma

* Toda la información será tratada como estrictamente confidencial por el OIEA. Solo estarán disponibles datos anonimizados y agregados.

Czech Version:

IAEA ISEMIR-IR průzkum
(verze pro společnosti provádějící defektoskopické činnosti)

(zaslat na adresu ISEMIR.Contact-Point@iaea.org)

1. Jakými prostředky zaznamenáváte individuální dávky Vašich defektoskopických pracovníků?

☐ Komerční software;
☐ Software dozimetrické služby;
☐ tabulka v MS Excel;
☐ Vytištěná verze;
☐ Nezaznamenáváme;
☐ Jiné (prosím uveďte)_____

2. Jaký typ dat zaznamenáváte?

☐ Osobní dávky;
☐ Údaje o zdroji ionizujícího záření;
☐ Havárie/nehody;
☐ Počet defektoskopických pracovníků;
☐ Záznamy o školení;
☐ Pracovní zatížení (například: počet použitých filmů za rok)；
☐ Jiné (prosím uveďte)_____

3. Jak často aktualizujete tyto záznamy?

☐ Měsíčně;
☐ Čtvrtletně;
☐ Jiné (prosím uveďte)_____

4. Jaké údaje musíte zasílat dozornému orgánu (SÚJB)?

☐ Osobní dávky;
☐ Záznamy o školení;
☐ Zdroje ionizujícího záření/pomocné zařízení;
☐ Havárie/nehody;
☐ Jiné (prosím uveďte)_____

5. Měli byste zájem o neplacený IAEA software pro zaznamenávání dávek, jejich analýzu a hlášení?

- Ano
- Ne

6. Pokud ano, jaké funkce tohoto softwaru byste uvítali?

☐ Periodická analýza obdržených dávek;
☐ Korelace: dávka/havárie;
☐ Korelace: dávka/pracovní činnost;

☐ Korelace: pracovní zatížení/dávka;
☐ Korelace: dávka/školení;
☐ Jiné (prosím uveďte)_____

7. Jaké údaje jste ochotni sdílet s IAEA?

☐ Individuální dávky;
☐ Údaje o zdroji ionizujícího záření;
☐ Havárie/nehody;
☐ Počet defektoskopických pracovníků;
☐ Záznamy o školení;
☐ Pracovní zatížení (například: počet použitých filmů za rok)；
☐ Jiné (prosím uveďte)_____

8. Jak často byste byli ochotni nahrávat data?

☐ Ročně;
☐ Měsíčně;
☐ Jiné (prosím uveďte)_____

9. Jaký způsob nahrávání dat byste preferovali?

☐ Online formulář;
☐ tabulka v MS Excel;
☐ Aplikace ke stažení;
☐ Jiné (prosím uveďte)_____

10. Znáte projekt IAEA ISEMIR-IR (the Information System on Occupational Exposure in Medicine, Industry and Research focusing on industrial radiography) pro společnosti provádějící defektoskopické činnosti?

o Ano
o Ne

11. Chtěli byste, aby IAEA vytvořila ISEMIR-IR uživatelský účet pro Vaši zem?

o Ano
o Ne

12. Jakým způsobem byste chtěli získávat informace a školení týkající se ISEMIR-IR?

☐ Webináře;
☐ Přímo na Vašem pracovišti;
☐ Manuál instrukcí;
☐ Newsletters；
☐ E-mail;
☐ Jiné (prosím uveďte)_____

Prosím uveďte detaily o Vaší společnosti v dotazníku níže (všechny informace budou považované za důvěrné a pouze pro účely IAEA)

Otázka	Rok	
	2020	2021
13. Radiografické zdroje		
13.1 Počet radioaktivních zdrojů Ir-192	počet zdrojů	počet zdrojů
13.1a Typická počáteční aktivita zdroje Ir-192 (volitelná odpověď)	TBq	TBq
13.1b Nejvyšší energie Ir-192 (volitelná odpověď)	TBq	TBq
13.2 Počet radioaktivních zdrojů Se-75	počet zdrojů	počet zdrojů
13.2a Typická počáteční aktivita zdroje Se-75 (volitelná odpověď)	TBq	TBq
13.2b Nejvyšší energie Se-75 (volitelná odpověď)	TBq	TBq
13.3 Počet radioaktivních zdrojů Co-60	počet zdrojů	počet zdrojů
13.3a Typická počáteční aktivita zdroje Co-60 (volitelná odpověď)	TBq	TBq
13.3b Nejvyšší energie `Co-60 (volitelná odpověď)	TBq	TBq
13.4 Počet generátorů RTG záření	počet generátorů	počet generátorů
13.4a Typické MV generátoru RTG záření (volitelná odpověď)	MV	MV
13.4b Typické mA generátoru RTG záření (volitelná odpověď)	mA	mA
14. Postupy společnosti		
14.1 Existují ve Vaší společnosti vyšetřovací úrovně pro profesní ozáření?	☐ Ano ☐ Ne	
14.1a. Pokud ano, jaká je vyšetřovací úroveň za měsíc?	mSv	mSv
14.2 Provádí Vaše společnost hodnocení zabezpečení radiační ochrany Vašich defektoskopických pracovníků?	☐ Ano ☐ Ne	
14.2a Pokud ano, kolikrát za rok se toto hodnocení přibližně provádí?	Počet hodnocení za rok	Počet hodnocení za rok
14.3 Provádí Vaše společnost vlastní kontroly	☐ Ano ☐ Ne	

Otázka	Rok	
	2020	2021
zaměřené na zajištění souladu radiační ochrany s právními předpisy? (volitelná odpověď)		
14.3 Pokud ano, kolik těchto kontrol bylo provedeno za rok? (volitelná odpověď)	Počet kontrol	Počet kontrol
15. Informace o dávkách		
15.1 Počet defektoskopických pracovníků	Počet pracovníků	Počet pracovníků
15.2 Počet použitých filmů za rok	Počet filmů	Počet filmů
15.3 Roční kolektivní dávka	man.mSv/rok	man.mSv/rok
15.4 Minimální detekovatelná úroveň	mSv	mSv
15.5 Prosím, uveďte počty pracovníků do intervalů dávek:		
roční dávka < minimální detekovatelná úroveň	Počet pracovníků	Počet pracovníků
minimální detekovatelná úroveň ≤ roční dávka < 1 mSv	Počet pracovníků	Počet pracovníků
1 mSv ≤ roční dávka < 5 mSv	Počet pracovníků	Počet pracovníků
5 mSv ≤ roční dávka < 10 mSv	Počet pracovníků	Počet pracovníků
10 mSv ≤ roční dávka < 15 mSv	Počet pracovníků	Počet pracovníků
15 mSv ≤ roční dávka < 20 mSv	Počet pracovníků	Počet pracovníků
20 mSv ≤ roční dávka < 30 mSv	Počet pracovníků	Počet pracovníků
30 mSv ≤ roční dávka < 50 mSv	Počet pracovníků	Počet pracovníků
50 mSv ≤ roční dávka	Počet pracovníků	Počet pracovníků
16. Havárie a nehody		
16.1 Počet havárií nebo nehod s dávkou ≤ 20mSv	Počet havárií nebo nehod	Počet havárií nebo nehod
16.2 Počet havárií nebo nehod s dávkou > 20mSv	Počet havárií nebo nehod	Počet havárií nebo nehod

Otázka	Rok	
	2020	2021
17. Informace o defektoskopických pracovnících (volitelné)		
Reprezentativní (vzorový) defektoskopický pracovník I		
17.1 Hp (10) dávka	mSv	mSv
17.1a Počet filmů za rok	Množství filmů	Množství filmů
17.1b Má potřebnou (platnou) kvalifikaci z radiační ochrany? (volitelná odpověď)	Ano/Ne	Ano/Ne
Reprezentativní (vzorový) defektoskopický pracovník II		
17.2 Hp (10) dávka	mSv	mSv
17.2a Počet filmů za rok	Množství filmů	Množství filmů
17.2b Má potřebnou (platnou) kvalifikaci z radiační ochrany? (volitelná odpověď)	Ano/Ne	Ano/Ne
Reprezentativní (vzorový) defektoskopický pracovník III		
17.3 Hp (10) dávka	mSv	mSv
17.3a Počet filmů za rok	Množství filmů	Množství filmů
17.3b Má potřebnou (platnou) kvalifikaci z radiační ochrany? (volitelná odpověď)	Ano/Ne	Ano/Ne

17. Vaše osobní údaje

Jméno a příjmení	Společnost/Instituce
Název pracovní pozice	Obec/město
E-mail:	Země

18. Poskytuji souhlas se zpracováním informací (odpovědi č. 13-17) pro účely IAEA ISEMIR-IR databáze*	podpis

* Se všemi informacemi bude nakládáno jako s důvěrnými a pouze pro účely IAEA. Veřejně dostupné budou jen údaje, které jsou anonymní.

German Version:

IAEA ISEMIR-IR Umfrage
(Version für ZfP-Unternehmen)

(bitte senden an: ISEMIR.Contact-Point@iaea.org)

1. Wie erfassen Sie die Personendosis für Ihre Radiographen?

☐ Kommerzielle Software;
☐ Eigene Software
☐ Software vom Messgerätehersteller;
☐ Excel Tabellen;
☐ Papierform;
☐ Die Personendosis wird nicht erfasst;
☐ Andere (bitte angeben) _____

2. Welche Art von Daten im Strahlenschutz speichern Sie?

☐ Personendosis;
☐ Details zu Strahlenquellen;
☐ Störfälle/Vorkommnisse/;
☐ Anzahl Radiographen;
☐ Aufzeichnungen über Schulungen;
☐ Arbeitspensum (z. B. Filme/Jahr)
☐ Andere (bitte angeben) _____

3. Wie häufig werden die Aufzeichnungen über Strahlendosen aktualisiert?

☐ monatlich;
☐ einmal im Quartal;
☐ anderer Zeitraum (bitte angeben) _____

4. Welche Daten müssen der Aufsichtsbehörde/zuständigen Behörde übermittelt werden?

☐ Strahlendosen;
☐ Schulungen;
☐ Strahlenquellen/Zubehör
☐ Störfälle/Vorkommnisse
☐ Aufzeichnungen über Schulungen;
☐ Arbeitspensum (z. B. Filme/Jahr)
☐ Andere (bitte angeben) _____

5. Haben Sie Interesse an einer kostenlosen IAEA Software für die Dokumentation, Analyse und Meldung von Strahlendosen?

☐ Ja
☐ Nein

6. Wenn ja, gibt es spezielle Features die die Software beinhalten sollte?

☐ Periodische Analyse der Strahlendosen;
☐ Zusammenhang: Dosis/Vorkommnis;
☐ Zusammenhang: Strahlendosis/Tätigkeit;
☐ Zusammenhang: Arbeitspensum/Dosis;

☐ Zusammenhang: Dosis/Schulungen;
☐ Andere spezielle Features (bitte angeben) _____

7. Welche Art von Daten würden Sie mit der IAEA teilen?

☐ Personendosis;
☐ Details zu Strahlenquellen;
☐ Störfälle/Vorkommnisse;
☐ Anzahl Radiographen;
☐ Aufzeichnungen über Schulungen;
☐ Arbeitspensum (z. B. Filme/Jahr)
☐ Andere (bitte angeben) _____

8. Wie oft wären Sie bereit einen Datenupload/ein Update durchzuführen?

☐ jährlich;
☐ monatlich;
☐ anderer Zeitraum (bitte angeben) _____

9. Auf welche Art würden Sie gerne einen Datenupload durchführen?

☐ Online Web-App;
☐ Excel-Tabelle;
☐ Desktop Applikation;
☐ Andere (bitte angeben) _____

10. Kennen Sie das IAEA ISEMIR-IR Projekt für ZfP-Unternehmen?

☐ Ja
☐ Nein

11. Hätten Sie gerne, dass die IAEA einen ISEMIR-IR Account für Ihr Unternehmen anlegt??

☐ Ja
☐ Nein

12. Auf welchem Weg würden Sie gerne Informationen und Schulungen zu ISEMIR-IR erhalten?

☐ Webinare;
☐ Präsenzveranstaltungen;
☐ Handbuch;
☐ Newsletter
☐ E-Mail
☐ Anders (bitte angeben) _____

Bitte teilen Sie uns ein paar Details Ihres ZfP-Unternehmens über nachfolgenden Fragebogen mit (Alle Informationen werden von der IAEA als streng vertraulich behandelt)

Frage	Jahr	
	2020	2021
13. Strahlenquellen für die technische Radiographie		
13.1 Anzahl Ir192-Strahler	Anzahl Strahle	Anzahl Strahle
13.1a Typische Ausgangsaktivität der Ir192-Strahler (optional)	TBq	TBq
13.1b Maximale Energie der Ir192-Strahler (optional)	TBq	TBq
13.2 Anzahl Se75-Strahler	Anzahl Strahle	Anzahl Strahle
13.2a Typische Ausgangsaktivität der Se75-Strahler (optional)	TBq	TBq
13.2b Maximale Energie der Se75-Strahler (optional)	TBq	TBq
13.3 Anzahl Co60-Strahler	Anzahl Strahler	Anzahl Strahle
13.3a Typische Ausgangsaktivität der Co60-Strahler (optional)	TBq	TBq
13.3b Maximale Energie der Co60-Strahler (optional)	TBq	TBq
13.4 Anzahl Röntgeneinrichtungen	Anzahl Röntgeneinrichtungen	Anzahl Röntgeneinrichtungen
13.4a Typische Spannung (in MV) (optional)	MV	MV
13.4b Typischer Strom (in mA) (optional)	mA	mA
14. Firmeninterne Handlungsanweisungen		
14.1 Gibt es bei der beruflichen Exposition für firmeninterne Untersuchungen interne “Dosisrichtwerte”?	☐ Ja ☐ Nein	
14.1a. Wenn ja, wo liegen die Richtwerte?	mSv	mSv

Frage	Jahr	
	2020	2021
14.2 Führt Ihre Firma eine interne Beurteilung der Radiographen in Bezug auf die berufliche Exposition durch?	☐ Ja ☐ Nein	
14.2a Wenn ja, schätzen Sie, wie oft ein Radiograph pro Jahr von Ihrem Unternehmen beurteilt wird?	Beurteilungen pro Jahr	Beurteilungen pro Jahr
14.3 Kontrolliert Ihre Firma nach eigenen Vorgaben die Einhaltung der Sicherheitsstandards und Rechtsvorschriften im Strahlenschutz? (optional)	☐ Ja ☐ Nein	
14.3 Wenn ja, wie viele Kontrollen werden pro Jahr durchgeführt? (optional)	Anzahl Inspektionen	Anzahl Inspektionen
15. Information zu Strahlendosis		
15.1 Anzahl beruflich exponierter Personen	Anzahl Mitarbeiter	Anzahl Mitarbeiter
15.2 Anzahl belichteter Filme pro Jahr	Anzahl Filme	Anzahl Filme
15.3 Jährliche Kollektivdosis	mSv pro Person und Jahr	mSv pro Person und Jahr
15.4 untere Messschwelle	mSv	mSv
15.5 Bitte geben Sie die Anzahl der exponierten Mitarbeiter für die unten angegebenen Dosisbereichen an:		
Jahresdosis < untere Messschwelle	Anzahl Mitarbeiter	Anzahl Mitarbeiter
untere Messschwelle ≤ Jahresdosis < 1 mSv	Anzahl Mitarbeiter	Anzahl Mitarbeiter
1 mSv ≤ Jahresdosis < 5 mSv	Anzahl Mitarbeiter	Anzahl Mitarbeiter
5 mSv ≤	Anzahl Mitarbeiter	Anzahl Mitarbeiter

Frage	Jahr	
	2020	2021
Jahresdosis < 10 mSv		
10 mSv ≤ Jahresdosis < 15 mSv	Anzahl Mitarbeiter	Anzahl Mitarbeiter
15 mSv ≤ Jahresdosis < 20 mSv	Anzahl Mitarbeiter	Anzahl Mitarbeiter
20 mSv ≤ Jahresdosis < 30 mSv	Anzahl Mitarbeiter	Anzahl Mitarbeiter
30 mSv ≤ Jahresdosis < 50 mSv	Anzahl Mitarbeiter	Anzahl Mitarbeiter
50 mSv ≤ Jahresdosis	Anzahl Mitarbeiter	Anzahl Mitarbeiter
16. Störfälle und Vorkommnisse		
16.1 Anzahl von Störfällen oder Vorkommnissen mit Strahlendosen ≤ 20mSv	Anzahl Störfälle/Vorkommnisse	Anzahl Störfälle/Vorkommnisse
16.2 Anzahl von Störfällen oder Vorkommnissen mit Strahlendosen > 20mSv	Anzahl Störfälle/Vorkommnisse	Anzahl Störfälle/Vorkommnisse
17. Informationen über Radiographen (optional)		
Representativer Radiograph I		
17.1 Tiefen-Personendosis Hp (10)	mSv	mSv
17.1a Anzahl Filme pro Jahr	Anzahl Filme	Anzahl Filme
17.1b Besitzt er/sie gültige Qualifikationen im Strahlenschutz (optional)?	Ja/Nein	Ja/Nein
Repräsentativer Radiograph II		
17.2 Tiefen-Personendosis Hp (10)	mSv	mSv
17.1a Anzahl Filme pro Jahr	Anzahl Filme	Anzahl Filme
17.1b Besitzt er/sie gültige Qualifikationen im Strahlenschutz (optional)?	Ja/Nein	Ja/Nein

Frage	Jahr	
	2020	2021
Repräsentativer Radiograph III		
17.3 Tiefen-Personendosis Hp (10)	mSv	mSv
17.1a Anzahl Filme pro Jahr	Anzahl Filme	Anzahl Filme
17.1b Besitzt er/sie gültige Qualifikationen im Strahlenschutz (optional)?	Ja/Nein	Ja/Nein

17. Ihre persönlichen Daten

Vor- und Nachname	Firma/Institution
Berufsbezeichnung oder Position	Ort
E-Mail:	Land

18. Ich bin damit einverstanden, dass die Daten dieses Fragebogens (Fragen 13 bis 17) von der IAEA in die ISEMIR-IR Datenbank übernommen werden*	Unterschrift

* Alle Informationen werden von der IAEA als streng vertraulich behandelt. Nur anonymisierte und zusammengefasste Daten werden zugänglich gemacht.

French Version:

AIEA ISEMIR-IR Enquête
(la version pour les fournisseurs de service du contrôle non destructif)

(veuillez renvoyer a ISEMIR.Contact-Point@iaea.org)

1. De quelle manière tenez-vous un registre des doses individuelles des radiographistes?

☐ Logiciel commercial;
☐ Logiciel d'un prestataire de service de dosimétrie;
☐ Excel spreadsheet;
☐ Copie-papier;
☐ On ne les enregistre pas;
☐ Autres (veuillez préciser) _____

2. Quelle sorte de données enregistrez-vous?

☐ Doses individuelles;
☐ Détails sur les sources;
☐ Accidents/incidents;
☐ Nombre de radiographistes;
☐ Information sur la formation professionnelle;
☐ Charge de travail (par exemple: clichés / an) ;
☐ Autres (veuillez préciser) _____

3. A quelle fréquence mettez-vous à jour des enregistrements des doses?

☐ Mensuelle;
☐ Trimestrielle;
☐ Autres (veuillez préciser) _____

4. Quelle sorte de données êtes-vous obligés de transmettre à l'Autorité Réglementaire?

☐ Dose;
☐ Information sur la formation professionnelle;
☐ Sources/ équipement
☐ Accidents/incidents
☐ Autres (veuillez préciser) _____

5. Seriez-vous intéressés par un logiciel gratuit de l'AIEA pour enregistrer, analyser et produire un rapport?

- Oui
- Non

6. Si tel est le cas, est-ce qu'il y a des fonctions particulières que vous voudriez voir dans le logiciel de ce type?

☐ Analyse périodique des doses;
☐ Corrélation: dose/accidents;
☐ Corrélation: dose/caractéristique d'emploi;

☐ Corrélation: Charge de travail/dose;
☐ Corrélation: dose/formation;
☐ Autres (veuillez préciser) _____

7. Quelle sorte de données êtes-vous prêt à partager avec l'AIEA?

☐ Doses individuelles;
☐ Détails sur les sources;
☐ Accidents/incidents;
☐ Nombre de radiographistes;
☐ Information sur la formation professionnelle;
☐ Charge du travail (par exemple: pellicule/an) ;
☐ Autres (veuillez préciser) _____

8. A quelle fréquence voudriez-vous mettre à jour ces données?

☐ Annuellement;
☐ Mensuellement;
☐ Autres (veuillez préciser) _____

9. Quels moyens pour télécharger les données préférez-vous?

☐ En ligne par application Web ;
☐ Excel spreadsheet;
☐ Application pour votre ordinateur;
☐ Autres (veuillez préciser) _____

10. Etes-vous au courant du projet de l'AIEA pour les prestataires de service de contrôle non destructif ?

- Oui
- Non

11. Est-ce que vous voulez que l'AIEA crèe un compte gratuit dans ISEMIR-IR pour votre entreprise?

- Oui
- Non

12. Par quels moyens préférez-vous recevoir l'information et matériel de formation sur ISEMIR-IR?

☐ Webinaires;
☐ Sessions sur place;
☐ Manuel d'instructions;
☐ Newsletter ;
☐ E-mail ;
☐ Autres (veuillez préciser) _____

Veuillez partager les détails sur votre entreprise en remplissant le questionnaire dessous (Toute information sera traité de manière confidentielle par l'AIEA)

Question	Année	
	2020	2021
13. Sources de radiographie		
13.1 Nombre de sources radioactives d'Ir-192	Nombre de sources	Nombre de sources
13.1a Activité initiale typique des sources d'Ir-192 (facultatif)	TBq	TBq
13.1b Énergie maximale de la source Ir-192 (facultatif)	TBq	TBq
13.2 Nombre de sources radioactives de Se-75	Nombre de sources	Nombre de sources
13.2a Activité initiale typique des sources de Se-75 (facultatif)	TBq	TBq
13.2b Énergie maximale de la source Se-75 (facultatif)	TBq	TBq
13.3 Nombre de sources radioactives de Co-60	Nombre de sources	Nombre de sources
13.3a Activité initiale typique de source de Co-60 (facultatif)	TBq	TBq
13.3b Énergie maximale de la source Co-60 (facultatif)	TBq	TBq
13.4 Nombre de générateurs de rayonnement (à rayons X)	Nombre de générateurs	Nombre de générateurs
13.4a MV typique de générateur de rayonnement (à rayons X) (facultatif)	MV	MV
13.4b mA typique de générateur de rayonnement (à rayons X) (facultatif)	mA	mA
14. Procédures d'entreprise		

Question	Année	
	2020	2021
14.1 Est-ce qu'il y a des seuils d'investigations de l'exposition professionnelle dans votre entreprise?	☐ Oui ☐ Non	
14.1a. Si tel est le cas, quel est le seuil d'investigation par mois?	mSv	mSv
14.2 Est-ce que votre entreprise effectue l' évaluation des radiographistes concernant la radioprotection professionnelle?	☐ Oui ☐ Non	
14.2a Si tel est le cas, combien de fois environ par année les radiographistes sont-ils évalués par votre entreprise?	Nombre de fois	Nombre de fois
14.3 Est-ce que votre entreprise effectue ses propres inspections pour vérifier la conformité aux normes de sûreté radiologique et aux règlements? (facultatif)	☐ Oui ☐ Non	
14.3a Si tel est le cas, combien d' inspections de conformité ont été effectuées au cours d'une année? (facultatif)	Nombre d'inspections	Nombre d'inspections
15. L'information sur les doses		
15.1 Nombre de travailleurs exposés professionnellement	Nombre de travailleurs	Nombre de travailleurs
15.2 Nombre de clichés exposés au cours d'une année	Nombre de pellicules	Nombre de pellicules

Question	Année	
	2020	2021
15.3 Dose collective annuelle	pers.mSv/an	pers.mSv/an
15.4 Niveau minimum détectable	mSv	mSv
15.5 Veuillez presenter le nombre de travailleurs dans l'intervalle des doses:		
Dose annuelle < Niveau minimum détectable	Nombre de travailleurs	Nombre de travailleurs
Niveau minimum détectable ≤Dose annuelle < 1 mSv	Nombre de travailleurs	Nombre de travailleurs
1 mSv ≤Dose annuelle < 5 mSv	Nombre de travailleurs	Nombre de travailleurs
5 mSv ≤Dose annuelle < 10 mSv	Nombre de travailleurs	Nombre de travailleurs
10 mSv ≤Dose annuelle < 15 mSv	Nombre de travailleurs	Nombre de travailleurs
15 mSv ≤Dose annuelle < 20 mSv	Nombre de travailleurs	Nombre de travailleurs
20 mSv ≤Dose annuelle < 30 mSv	Nombre de travailleurs	Nombre de travailleurs
30 mSv ≤Dose annuelle < 50 mSv	Nombre de travailleurs	Nombre de travailleurs
50 mSv ≤Dose annuelle	Nombre de travailleurs	Nombre de travailleurs
16. Accidents et incidents		
16.1 Nombre d'accidents et d'incidents avec des doses ≤ 20mSv	Nombre d'accidents/d'incidents	Nombre d'accidents/d'incidents
16.2 Nombre d'accidents et d'incidents avec les doses > 20mSv	Nombre d'accidents/d'incidents	Nombre d'accidents/d'incidents
17. L'information sur les radiographistes (facultatif)		
Représentant Radiographiste 1		

Question	Année	
	2020	2021
17.1 Hp (10) dose	mSv	mSv
17.1a Nombre de clichés au cours d'une année	Nombre de pellicules	Nombre de pellicules
17.1b Est-ce il/elle a une qualification valide de sûreté radiologique (facultatif)?	Oui/Non	Oui/Non
Représentant Radiographiste 2		
17.2 Hp (10) dose	mSv	mSv
17.2a Nombre de pellicules au cours d'une année	Nombre de pellicules	Nombre de pellicules
17.2b Est-ce il/elle a la qualification valide au sujet de sûreté radiologique (facultatif)?	Oui/Non	Oui/Non
Représentant Radiographiste 3		
17.3 Hp (10) dose	mSv	mSv
17.3a Nombre de clichés au cours d'une année	Nombre de pellicules	Nombre de pellicules
17.3b Est-ce il/elle a une qualification valide au sujet de la sûreté radiologique (facultatif)?	Oui/Non	Oui/Non

17. Vos renseignements personnels

Prénom et Nom	Entreprise/Institution
Titre du poste ou position	Ville
E-mail:	Pays

18. J'accepte de partager les données du questionnaire (questions 13-17) avec la base de données de l'AIEA ISEMIR-IR *

signature

* Toute information sera traitée de manière confidentielle par l'AIEA. Seules, des données anonymes et agrégées seront mises à disposition.

Russian Version:

Исследование МАГАТЭ по ISEMIR-IR

(версия для компаний по неразрушающему контролю)

(просьба отправить заполненную форму на ISEMIR.Contact-Point@iaea.org)

1. Какие средства используются для учета индивидуальных доз дефектоскопистов?

☐ Коммерческое ПО;
☐ ПО компании, предоставляющей услуги ДК
☐ Excel таблицы
☐ Учет на бумаге
☐ Учет не ведется
☐ Другое (пожалуйста укажите) _____

2. Учет каких данных ведется?

☐ Индивидуальные дозы
☐ Параметры источников
☐ Инциденты/аварии
☐ Численность дефектоскопистов
☐ Образование работников
☐ Рабочая загрузка (например: снимки/год)
☐ Другое (пожалуйста укажите) _____

3. С какой частотой обновляются записи по дозовым нагрузкам?

☐ Раз в месяц;
☐ Раз в квартал;
☐ Другое (пожалуйста уточните)_____

4. Какие данные передаются Регулятору?

☐ Индивидуальные дозы;
☐ Образование работников;
☐ Источники/оборудование
☐ Инциденты/аварии
☐ Другое (пожалуйста уточните)_____

5. Заинтересованы ли Вы в бесплатном ПО от МАГАТЭ для учета доз, анализа и отчетности?*

- Да
- Нет

6. Если да, какой функционал Вы хотели бы видеть в таком ПО?

☐ Анализ доз за период
☐ Корреляция: доза/аварийность;
☐ Корреляция: доза/Условия труда;
☐ Корреляция: рабочая нагрузка/доза;

☐ Корреляция: доза/квалификация сотрудника;

☐ Другие функции (Пожалуйста уточните) _____

7. Какие данные Вы готовы предоставлять МАГАТЭ?

☐ Индивидуальные дозы

☐ Параметры источников

☐ Инциденты/аварии

☐ Численность дефектоскопистов

☐ Образование работников

☐ Рабочая загрузка (например: снимки/год)

☐ Другое (пожалуйста укажите) _____

8. Как часто Вы могли бы загружать/обновлять данные?

☐ Раз в год;

☐ Раз в месяц;

☐ Другое (пожалуйста уточните) _____

9. Какой способ загрузки данных Вы бы предпочли?

☐ Web-приложение (онлайн);

☐ Excel таблица;

☐ Приложение на ПК;

☐ Другое (пожалуйста уточните) _____

10. Знаете ли Вы о проекте МАГАТЭ ISEMIR-IR для компаний по неразрушающему контролю?

- Да
- Нет

11. Хотели ли бы Вы, чтобы МАГАТЭ создали для Вас аккаунт в ISEMIR-IR?

- Да
- Нет

12. Как вы хотели бы получать общую информацию и учебные материалы по ISEMIR-IR ?

☐ Вебинары;

☐ Очные встречи;

☐ Инструкции и руководства;

☐ Новостная рассылка

Пожалуйста заполните формуляр ниже данными по Вашей компании (Вся информация, указанная ниже рассматривается в МАГАТЭ как строго конфиденциальная)

Вопрос	Год	
	2020	2021
13. Источник		
13.1 Количество источников Ir-192	number of sources	number of sources

Вопрос	Год	
	2020	2021
13.1a Начальная активность источника Ir-192 (опционально)	TBq	TBq
13.1b максимальная энергия ИК Ir-192 (опционально)	TBq	TBq
13.2 Количество источников Se-75	number of sources	number of sources
13.2a Начальная активность источника Se-75 (опционально)	ТБк	ТБк
13.2b максимальная энергия ИК Se-75 (опционально)	ТБк	ТБк
13.3 Количество источников Co-60	Количество источников	Количество источников
13.3a Начальная активность источника Co-60 (опционально)	ТБк	ТБк
13.3b максимальная энергия ИК Co-60 (optional)	ТБк	ТБк
13.4 Количество X-ray установок	Количество установок	Количество установок
13.4a МВаж X-ray установок (опционально)	МВ	МВ
13.4b мАаж of X-ray установок (опционально)	мА	мА
14. Рабочие практики		
14.1 Установлена ли в Вашей организации уровни расследования?	☐ Да ☐ Нет	
14.1a. Если да, укажите значение в месяц?	мЗв	мЗв
14.2 Проводит ли Ваша компания проверку дефектоскопистов на знание правил радиационной безопасности и защиты на рабочем месте?	☐ Да ☐ Нет	
14.2a Если да, как приблизительно	Число раз за год	Число раз за год

Вопрос	Год	
	2020	2021
сколько раз в год дефектоскопист проходит такую проверку?		
14.3 Проводит ли Ваша компания внутренние проверки соответствия стандартам и требованиям обеспечения радиационной безопасности? (опционально)	☐ Да ☐ Нет	
14.3 Если да, сколько таких проверок было проведено за год? (опционально)	Количество проверок	Количество проверок
15. Dose information		
15.1 Число работников, подверженных облучению	Число работников	Число работников
15.2 Число снимков за год	Число снимков	Число снимков
15.3 Коллективная годовая доза	чел.мЗв/год	чел.мЗв/год
15.4 Минимально детектируемый уровень	мЗв	мЗв
15.5 Пожалуйста укажите количество работников по диапазонам доз:		
Годовая доза < минимально детектируемый уровень	Количество работников	Количество работников
минимально детектируемый уровень≤ годовая доза <1 мЗв	Количество работников	Количество работников
1 мЗв ≤ годовая доза < 5 мЗв	Количество работников	Количество работников
5 мЗв ≤ годовая доза < 10 мЗв	Количество работников	Количество работников

Вопрос	Год	
	2020	2021
10 мЗв ≤ годовая доза < 15 мЗв	Количество работников	Количество работников
15 мЗв ≤ годовая доза < 20 мЗв	Количество работников	Количество работников
20 мЗв ≤ годовая доза < 30 мЗв	Количество работников	Количество работников
30 мЗв ≤ годовая доза < 50 мЗв	Количество работников	Количество работников
50 мЗв ≤годовая доза	Количество работников	Количество работников
16. Инциденты и аварии		
16.1 Число инцидентов или аварий с дозами ≤ 20 мЗв	Число инцидентов /аварий	Число инцидентов /аварий
16.2 Число инцидентов или аварий с дозами > 20 мЗв	Число инцидентов /аварий	Число инцидентов /аварий
17. Информация о дефектоскопистах (опционально)		
Репрезентативный дефектоскопист I		
17.1 Hp (10) доза	мЗв	мЗв
17.1a Число снимков в год	Число снимков	Число снимков
17.1b Имеет ли квалификацию в области радиационной защиты (опционально)?	Да/Нет	Да/Нет
Репрезентативный дефектоскопист II		
17.2 Hp (10) доза	мЗв	мЗв
17.2a Число снимков в год	Число снимков	Число снимков
17.2b Имеет ли квалификацию в области радиационной защиты (опционально)?	Да/Нет	Да/Нет
Репрезентативный дефектоскопист III		
17.3 Hp (10) доза	мЗв	мЗв

Вопрос	Год	
	2020	2021
17.3a Число снимков в год	Число снимков	Число снимков
17.3b Имеет ли квалификацию в области радиационной защиты (опционально)?	Да/Нет	Да/Нет

17. Ваши контактные данные

Имя и фамилия	Организация
Должность	Город/населенный пункт
E-mail:	Страна

18. Я согласен с внесением данных данного исследования (вопросы 13-17) в базу данных МАГАТЭ ISEMIR-IR*	Подпись

* Вся представленная информация считается МАГАТЭ строго конфиденциальной. Только анонимизированные и общие статистические данные могут быть опубликованы.

Slovak Version:

IAEA ISEMIR-IR dotazník
(verzia pre defektoskopárov)

(zaslať na adresu ISEMIR.Contact-Point@iaea.org)

1. Akými prostriedkami zaznamenávate individuálne dávky Vašich defektoskopárov?

☐ Komerčné softvéry;
☐ Softvér dozimetrickej služby;
☐ Excel tabuľky;
☐ Tlačená verzia;
☐ Nezaznamenávam;
☐ Iné (prosím uveďte)_____

2. Aký typ dát zaznamenávate?

☐ Osobné dávky;
☐ Údaje o zdroji ionizujúceho žiarenia;
☐ Havárie/nehody;
☐ Počet defektoskopárov;
☐ Záznamy o školení;
☐ Pracovné zataženie (napríklad: počet použitých filmov za rok);
☐ Iné (prosím uveďte)_____

3. Ako často aktualizujete tieto záznamy?

☐ Mesačne;
☐ Štvrťročne;
☐ Iné (prosím uveďte)_____

4. Aké údaje musíte nahlasovať dozornému orgánu (ÚVZ SR)?

☐ Osobné dávky;
☐ Záznamy o školení;
☐ Zdroje ionizujúceho žiarenia/pomocné zariadenia;
☐ Havárie/nehody;
☐ Iné (prosím uveďte)_____

5. Mali by ste záujem o neplatený IAEA softvér pre zaznamenávanie dávok, ich analýzu a nahlasovanie?

- Áno
- Nie

6. Ak áno, aké funkcie by ste uvítali v tomto sotfvéri?

☐ Periodická analýza prijatých dávok;
☐ Korelácia: dávka/havária;
☐ Korelácia: dávka/pracovná činnosť;
☐ Korelácia: pracovné zataženie/prijatá dávka;

☐ Korelácia: prijatá dávka/účasť na školení;
☐ Iné (prosím uveďte)_____

7. Aké údaje ste pripravený zdielať s IAEA?

☐ Individuálne dávky;
☐ Údaje o zdroji ionizujúceho žiarenia;
☐ Havárie/nehody;
☐ Počeť defektoskopárov;
☐ Záznamy o školení;
☐ Pracovné zaťaženie (napríklad: počet použitých filmov za rok);
☐ Iné (prosím uveďte)_____

8. Ako často ste ochotný nahrávať data?

☐ Ročne;
☐ Mesačne;
☐ Iné (prosím uveďte)_____

9. Aký spôsob nahrávania dát preferujete?

☐ Online formulár;
☐ Excel tabuľky;
☐ Aplikácia na počítač;
☐ Iné (prosím uveďte)_____

10. Poznáte projekt IAEA ISEMIR-IR pre defektoskopárov?

o Áno
o Nie

11. Chceli by ste aby IAEA vytvorila ISEMIR-IR používateľský účet pre vašu krajinu?

o Áno
o Nie

12. Akým spôsobom by ste chceli dostávať informácie a školenia na ISEMIR-IR?

☐ Webináre;
☐ Stretnutia na pracovisku;
☐ Manuál inštrukcií;
☐ Newsletters;
☐ E-mial;
☐ Iné (prosím uveďte)_____

Prosím uveďte detaily o Vašej spoočnosti v dotazníku nižšie (všetky informácie budú považované za citlivé a využité iba pre účely IAEA)

Otázka	Rok	
	200	2021
13. Rádiografické zdroje		
13.1 Počet rádioaktívnych zdrojov Ir-192	počet zdrojov	počet zdrojov
13.1a Zvyčajná počiatočná aktivita zdroja Ir-192 (voliteľná odpoveď)	TBq	TBq
13.1b Maximálna energia zdroja Ir-192 (voliteľná odpoveď)	TBq	TBq
13.2 Počet rádioaktívnych zdrojov Se-75	počet zdrojov	počet zdrojov
13.2a Zvyčajná počiatočná aktivita zdroja Se-75 (voliteľná odpoveď)	TBq	TBq
13.2b Maximálna energia zdroja Se-75 (voliteľná odpoveď)	TBq	TBq
13.3 Počet rádioaktívnych zdrojov Co-60	počet zdrojov	počet zdrojov
13.3a Zvyčajná počiatočná aktivita zdroja Co-60 (voliteľná odpoveď)	TBq	TBq
13.3b Maximálna energia zdroja Co-60 (voliteľná odpoveď)	TBq	TBq
13.4 Počet generátorov RTG žiarenia	počet zdrojov	počet zdrojov
13.4a Zvyčajné MV generátora RTG žiarenia (voliteľná odpoveď)	MV	MV
13.4b Zvyčajné mA generátora RTG žiarenia (voliteľná odpoveď)	mA	mA
14. Postupy spoločnosti		
14.1 Existujú vo vašej spoločnosti vyšetrovacie úrovne pre ožiarenie pracovníka?	☐ Áno ☐ Nie	
14.1a. Ak áno, aká je vyšetrovacie úrovne za mesiac ?	mSv	mSv
14.2 Vykonáva vaša spoločnosť hodnotenie zabezpečenia radiačnej ochrany Vašich defektoskopárov?	☐ Áno ☐ Nie	

Otázka	Rok	
	200	2021
14.2a Ak áno, približne koľkokrát za rok je hodnotenie vykonávané?	Počet hodnotení za rok	Počet hodnotení za rok
14.3 Vykonáva vaša spoločnosť vlastnú kontrolu súladu radiačnej ochrany s právnymi predpismi? (voliteľná odpoveď)	☐ Áno ☐ Nie	
14.3 Ak áno, koľko kontrol bolo vykonaných? (voliteľná odpoveď)	Počet kontrôl	Počet kontrôl
15. Informácie o dávkach		
15.1 Počet pracovníkov = defektoskopárov?	Počet pracovníkov	Počet pracovníkov
15.2 Počet použitých filmov za rok?	Počet filmov	Počet filmov
15.3 Ročná kolektívna dávka?	man.mSv/year	man.mSv/year
15.4 Minimálna detegovateľná úroveň?	mSv	mSv
15.5 Prosím, uveďte počty pracovníkov do intervalu dávok:		
ročná dávka < minimálna detegovateľná úroveň	Počet pracovníkov	Počet pracovníkov
minimálna detegovateľná úroveň ≤ ročná dávka < 1 mSv	Počet pracovníkov	Počet pracovníkov
1 mSv ≤ ročná dávka < 5 mSv	Počet pracovníkov	Počet pracovníkov
5 mSv ≤ ročná dávka < 10 mSv	Počet pracovníkov	Počet pracovníkov
10 mSv ≤ ročná dávka < 15 mSv	Počet pracovníkov	Počet pracovníkov
15 mSv ≤ ročná dávka < 20 mSv	Počet pracovníkov	Počet pracovníkov
20 mSv ≤ ročná dávka < 30 mSv	Počet pracovníkov	Počet pracovníkov
30 mSv ≤ ročná dávka	Počet pracovníkov	Počet pracovníkov

Otázka	Rok	
	200	2021
< 50 mSv		
50 mSv ≤ ročná dávka	Počet pracovníkov	Počet pracovníkov
16. Havárie a nehody		
16.1Počet havárií alebo nehôd s dávkou ≤ 20mSv	Počet havárií alebo nehôd	Počet havárií alebo nehôd
16.2 1Počet havárií alebo nehôd s dávkou > 20mSv	Počet havárií alebo nehôd	Počet havárií alebo nehôd
17. Informácie o defektoskopároch (voliteľné)		
Vzorkový defektoskopár 1		
17.1 Hp (10) dávka	mSv	mSv
17.1a Počet filmov za rok	Množstvo filmov	Množstvo filmov
17.1b Má potrebnú kvalifikáciu z radiačnej ochrany? (voliteľná odpoveď)	Áno/Nie	Áno/Nie
Vzorkový defektoskopár 2		
17.2 Hp (10) dávka	mSv	mSv
17.2a Počet filmov za rok	Množstvo filmov	Množstvo filmov
17.2b Má potrebnú kvalifikáciu z radiačnej ochrany? (voliteľná odpoveď)	Áno/Nie	Áno/Nie
Vzorkový defektoskopár 3		
17.3 Hp (10) dávka	mSv	mSv
17.3a Počet filmov za rok	Množstvo filmov	Množstvo filmov
17.3b Má potrebnú kvalifikáciu z radiačnej ochrany? (voliteľná odpoveď)	Áno/Nie	Áno/Nie

17. Vaše osobné údaje

Meno a priezvisko	Spoločnosť/Inštitúcia
Názov pracovnej pozície	Obec/mesto
E-mail:	Krajina

18. Súhlasím, aby boli moje odpovede spracované na účely IAEA ISEMIR-IR databázy	podpis

* Všetky informácie budú považované za citlivé a využité iba pre účely IAEA. Verejne budú dostupné iba spracované údaje, ktoré sú anonymizované.

Turkish Version:

UAEA ISEMIR-IR Anketi
(Tahribatsız Muayene Servisleri icin düzenlenmiştir)

(Yanıtın gönderilmesi gereken e-posta adresi: ISEMIR.Contact-Point@iaea.org)

1. Radyografçılarınızın bireysel dozlarını nasıl kaydediyorsunuz?

☐ Ticari yazılım;
☐ Dozimetri servise saglayıcının temin ettigi özel yazılım ;
☐ Excel dokümanında;
☐ Yazılı;
☐ Kaydetmiyorum;
☐ Diğer (lütfen belirtin) _____

2. Ne tip verileri kaydediyorsunuz?

☐ Bireysel doz;
☐ Kaynak detayları;
☐ Kaza/olay;
☐ Radyografi sayıları;
☐ Eğitim kayıtları;
☐ İş yükü (örneğin: yılda cekilen film sayısı, film/yıl);
☐ Diğer (lütfen belirtin) _____

3. Doz kayıtlarınızı hangi sıklıkta güncelliyorsunuz?

☐ Aylık;
☐ Üç ayda bir;
☐ Diğer (lütfen belirtin) _____

4. Düzenleyici kuruluşa ne tür veri bildirme zorunluluğu bulunmaktadır?

☐ Doz;
☐ Eğitim kayıtları;
☐ Kaynaklar/ekipman
☐ Kazalar/olaylar
☐ Diğer (lütfen belirtin) _____

5. Uluslararası Atom Enerjisi Ajansı'nın (UAEA) ücretsiz doz kaydetme, analiz ve raporlama programıyla ilgilenir misiniz?

- Evet
- Hayır

6. Eğer ilgileniyorsaniz, programda görmek istediğiniz belirli özellikler nelerdir?

☐ Periyodik doz analizi;
☐ Karşılıklı ilişki - korelasyon: doz/kaza;
☐ Karşılıklı ilişki - korelasyon: doz/iş karakteristikleri ;

☐ Karşılıklı ilişki - korelasyon: iş yükü/doz;
☐ Karşılıklı ilişki - korelasyon: doz/eğitim;
☐ Diğer özellikler (lütfen belirtin) _____

7. UAEA ile ne tip veri paylaşmayı uygun görüyorsunuz?

☐ Bireysel doz;
☐ Kaynak detayları;
☐ Kaza/olaylar;
☐ Radyograf sayıları;
☐ Eğitim kayıtları;
☐ İş yükü (örneğin: yılda cekilen film sayısı -film/yıl);
☐ Diğer (lütfen belirtin) _____

8. Ne sıklıkta bilgi yüklemeyi/güncellemeyi uygun görüyorsunuz?

☐ Yıllık;
☐ Aylık;
☐ Diğer (lütfen belirtin) _____

9. Verilerinizi nasıl yüklemeyi tercih edersiniz?

☐ Online web-uygulaması;
☐ Excel dokümanı ile;
☐ Bilgisayar programı aracılığı ile;
☐ Diğer (lütfen belirtin) _____

10. UAEA'nin Tahribatsız Muayene Servisleri için ISEMIR-IR projesinden haberdar mısınız?

- Evet
- Hayır

11. UAEA'nin şirketiniz için bir ISEMIR-IR hesabı yaratmasını ister misiniz?

- Evet
- Hayır

12. ISEMIR-IR ile ilgili bilgi ve eğitim konusunda nasıl bilgilendirilmek istersiniz?

☐ Webinar;
☐ İş yerinde toplantı;
☐ Kullanım kılavuzu;
☐ E-posta bülteni (newsletter);
☐ E-mail;
☐ Diğer (lütfen belirtin) _____

Lütfen şirketiniz hakkında aşağıdaki formu kullanarak bilgi veriniz (Verilen bilgiler UAEA tarafından kesinlikle gizli tutulacaktır).

Soru	Yıl	
	2020	2021
13. Radyografi kaynakları		
13.1 Ir-192 radyoaktif kaynak sayısı	Kaynak sayısı	Kaynak sayısı
13.1a Ir-192 kaynağının tipik ilk aktivitesi (isteğe bağlı)	TBq	TBq
13.1b Ir-192 kaynağının maksimum enerji (isteğe bağlı)	TBq	TBq
13.2 Se-75 radyoaktif kaynak sayısı	Kaynak sayısı	Kaynak sayısı
13.2a Se-75 kaynağının tipik ilk aktivitesi (isteğe bağlı)	TBq	TBq
13.2b Se-75 kaynağının maksimum enerji (isteğe bağlı)	TBq	TBq
13.3 Co-60 radyoaktif kaynak sayısı	Kaynak sayısı	Kaynak sayısı
13.3a Co-60 kaynağının tipik ilk aktivitesi (isteğe bağlı)	TBq	TBq
13.3b Co-60 kaynağının maksimum enerji (isteğe bağlı)	TBq	TBq
13.4 Radyasyon üretici ünite sayısı (X-ray ünitesi)	Ünite sayısı	Ünite sayısı
13.4a Radyasyon üreticisinin tipik MV'u (X-ray ünitesi) (isteğe bağlı)	MV	MV
13.4b Radyasyon üreticisinin tipik mA'i (X-ray ünitesi) (isteğe bağlı)	mA	mA
14. Şirket prosedürleri		
14.1 Sirketiniz tarafindan belirlenmis mesleki rasdyasyon ile isinlanma icin inceleme seviyesi var mı?	☐ Evet ☐ Hayır	
14.1a. Cevabınız evet ise, aylık inceleme düzeyi nedir?	mSv	mSv
14.2 Şirketinizin radyografların mesleki radyasyondan korunmasi ile ilgili bir değerlendirme proseduru var mi?	☐ Evet ☐ Hayır	
14.2a Cevabınız evet ise, bir radyografi uzmanı	Yıllık değerlendirme sayısı	Yıllık değerlendirme sayısı

Soru	Yıl	
	2020	2021
şirketiniz tarafından yılda yaklaşık kaç kez değerlendiriliyor?		
14.3 Şirketiniz radyasyon güvenliği standartlarına ve yönetmeliklerine uygunluk için kendi öz denetimlerini yapıyor mu? (isteğe bağlı)	☐ Evet ☐ Hayır	
14.3 Cevabınız evet ise, yılda kaç tane uygunluk denetimi yapılıyor? (isteğe bağlı)	Denetim sayısı	Denetim sayısı
15. Doz bilgisi		
15.1 Mesleki radyasyona maruz kalan çalışan sayısı	Çalışan sayısı	Çalışan sayısı
15.2 Yıllık maruz kalan film sayısı	Film sayısı	Film sayısı
15.3 Yıllık kolektif Doz	man.mSv/yıl	man.mSv/yıl
15.4 Minimum tespit edilebilir seviye	mSv	mSv
15.5 Lütfen doz aralıklarında çalışan sayısını belirtin:		
Yıllık Doz < tespit edilebilir minimum seviye	Çalışan sayısı	Çalışan sayısı
tespit edilebilir minimum seviye ≤ Yıllık Doz <1 mSv	Çalışan sayısı	Çalışan sayısı
1 mSv ≤ Yıllık Doz <5 mSv	Çalışan sayısı	Çalışan sayısı
5 mSv ≤ Yıllık Doz < 10 mSv	Çalışan sayısı	Çalışan sayısı
10 mSv ≤ Yıllık Doz < 15 mSv	Çalışan sayısı	Çalışan sayısı
15 mSv ≤ Yıllık Doz < 20 mSv	Çalışan sayısı	Çalışan sayısı
20 mSv ≤ Yıllık Doz < 30 mSv	Çalışan sayısı	Çalışan sayısı
30 mSv ≤ Yıllık Doz < 50 mSv	Çalışan sayısı	Çalışan sayısı
50 mSv ≤Yıllık Doz	Çalışan sayısı	Çalışan sayısı

Soru	Yıl	
	2020	2021
16. Kazalar ve olaylar		
16.1 Dozu 20 mSv'ye eşit veya altında olan kaza ve olay sayısı	Kaza/olay sayısı	Kaza/olay sayısı
16.2 Dozu 20 mSv'den yüksek olan kaza ve olay sayısı	Kaza/olay sayısı	Kaza/olay sayısı
17. Radyograflar hakkında bilgi (isteğe bağlı)		
Temsilci Radyografçı I		
17.1 Hp (10) doz	mSv	mSv
17.1a Yıllık film sayısı	Film sayısı	Film sayısı
17.1b Geçerli radyasyondan korunma yeterliliğine sahip mi (isteğe bağlı)?	Evet/Hayır	Evet/Hayır
Temsilci Radyografçı II		
17.2 Hp (10) doz	mSv	mSv
17.2a Yıllık film sayısı	Film sayısı	Film sayısı
17.2b Geçerli radyasyondan korunma yeterliliğine sahip mi (isteğe bağlı)?	Evet/Hayır	Evet/Hayır
Temsilci Radyografçı III		
17.3 Hp (10) doz	mSv	mSv
17.3a Yıllık film sayısı	Film sayısı	Film sayısı
17.3b Geçerli radyasyondan korunma yeterliliğine sahip mi (isteğe bağlı)?	Evet/Hayır	Evet/Hayır

17. Kişisel bilgileriniz

İsim ve soy isim

Şirket/Enstitü

İş unvanı veya pozisyonu

Şehir

E-posta:

Ülke

18. Anketteki (sorular 13-17) cevaplarımın UAEA ISEMIR-IR veri tabanına eklenmesini kabul ediyorum *

İmza

* Tüm bilgiler UAEA tarafından gizli tutulacaktır. Yalnızca anonimleştirilmiş ve toplu veriler kullanılabilir hale getirilecektir.

Japanese Version:

The IAEA ISEMIR-IR Survey

(version for NDT service providers)

IAEA ISEMIR-IR (Information System on Occupational Exposure in Medicine, Industry and Research-Industrial Radiography：医療、産業、研究における職業被ばくに関するデータベース：産業におけるラジオグラフィー)に関する調査

（非破壊検査サービス提供者用）

(to be sent to **ISEMIR.Contact-Point@iaea.org**)

提出先：**ISEMIR.Contact-Point@iaea.org**

1. By what means do you record the individual doses for your radiographers?

１．放射線技師の個人被ばく線量をどのような方法で記録していますか。

☐ Commercial software　市販のソフトウェア;

☐ Software of dosimetry service company

線量測定サービスを提供する会社のソフトウェア;

☐ Excel spreadsheet Excelのシート;

☐ Hard copy 紙媒体;

☐ I do not record 記録してない;

☐ Other (please specify) その他（具体的に記載してください）_____

2. What sort of data do you record?

２．どのような種類のデータを記録していますか。

☐ Individual dose 個人被ばく線量;

☐ Sources details 線源;

☐ Accidents/incidents 事故／異常事象;

☐ Number of radiographers　放射線技師の数;

☐ Training records　訓練や研修の記録;

☐ Workload (for example: films/year)　作業量（例：年間のフィルム使用数）;

☐ Other (please specify) **その他（具体的に記載してください）** _____

3. How frequently do you update the dose records?

３．線量に関するデータをどのくらいの頻度で更新していますか。

☐ Monthly　毎月;

☐ Quarterly　四半期ごと;

☐ Other (please specify)　その他（具体的に記載してください）_____

4. What kind of data do you must report to regulator?

４．どのようなデータを規制機関に報告する必要がありますか。

☐ Individual dose　個人被ばく線量;

☐ Training records 訓練や研修の記録;

☐ Sources/equipment **線源／機器**

☐ Accidents/incidents事故／異常事象

☐ Other (please specify) その他（具体的に記載してください）_____

5. Would you be interested in IAEA free software for dose recording, analysis and reporting?

５．IAEAが提供する、線量の記録、分析、報告に関する無料のソフトウェアにご関心がありますか。

☐ Yes　☐ No

☐ はい　　☐ いいえ

6. If so, are there any particular features you would like to see in the software?

６．５．で「はい」と回答された場合、当該ソフトウェアに特に搭載して欲しい機能はありますか。

☐ Periodic dose analysis　定期的な線量の分析;

☐ Correlation: dose/accidents　線量と事故との相関;

☐ Correlation: dose/job characteristics　線量と職業との相関;

☐ Correlation: workload/dose　線量と作業量との相関;

☐ Correlation: dose/training　線量と訓練や研修との相関;

☐ Other particular features (please specify)_　その他（具体的に記載してください）_____

7. What kind of data you are ready to share with IAEA?

７．どのようなデータをIAEAと共有いただくことが可能ですか。

☐ Individual dose　個人被ばく線量;

☐ Sources details　線源;

☐ Accidents/incidents　事故／異常事象;

☐ Number of radiographers　放射線技師の数;

☐ Training records　訓練や研修の記録;

☐ Workload (for example: films/year)　作業量（例：年間のフィルム使用数）;

☐ Other (please specify) **その他（具体的に記載してください）** _____

8. How often you would be willing to upload/update data?

８．どのくらいの頻度でアップロード / 更新することが可能ですか。

☐ Annually　毎年;

☐ Monthly　毎月;

☐ Other (please specify) その他（具体的に記載してください）_____

9. What means of uploading your data do you prefer?

９．どのような方法でデータをアップロードすることを希望されますか。

☐ Online web-application　オンライン上のアプリケーションを通じて;

☐ Excel spreadsheet　Excelのシート;

☐ Desktop application　デスクトップ上のアプリケーションを通じて;

☐ Other (please specify)　その他（具体的に記載してください）_____

10. Are you aware of the IAEA ISEMIR-IR project for NDT companies?

10．非破壊検査会社用のIAEA ISEMIR-IR Projectをご存じでしたか。

☐ Yes　☐ No

☐ はい　　☐ いいえ

11. Would you like the IAEA to create ISEMIR-IR account for your company?

11．貴社用のISEMIR-IRアカウントをIAEAが作成することを希望されますか。

☐ Yes　☐ No

☐ はい　　☐ いいえ

12. In what way would you like to receive information and training on ISEMIR-IR?

12．どのような方法でISEMIR-IRやその研修に関する情報を入手することを希望されますか。

☐ Webinars;　ウェブによるセミナー

☐ On-site sessions;　現地における打ち合わせ

☐ Instruction manual;　操作マニュアルの提供

☐ Newsletters　ニュースレター;

☐ E-mail _____　;

☐ Other (please specify) その他（具体的に記載してください）_____

Please give some details on your company in the questionnaire below (All information will be treated as strictly confidential by the IAEA)

貴社に関する以下の質問にお答えください（提供いただいた情報に関しては、IAEAにおいて機密情報として厳重に管理いたします。）

Question / 質問	Year／年	
	2020	2021
13. Radiography sources　13．放射線源		
13.1 Number of Ir-192 radioactive sources 13.1　Ir-192 の線源数	number of sources 線源数	number of sources 線源数
13.1a Typical Initial activity of Ir-192 source (optional) 13.1a　Ir-192の代表的な初期放射能（任意）	TBq	TBq
13.1b Maximum energy of Ir-192 source　(optional) 13.1b　Ir-192源の最大エネルギー（任意）	TBq	TBq
13.2 Number of Se-75 radioactive sources 13.2　Se-75 の線源数	number of sources 線源数	number of sources 線源数
13.2a Typical Initial activity of Se-75 source (optional) 13.2a　Se-75の代表的な初期放射能（任意）	TBq	TBq
13.2b Typical end of use activity of Se-75 source　(optional) 13.2b　Se-75源の最大エネルギー（任意）	TBq	TBq
13.3 Number of Co-60 radioactive sources 13.3　Co-60の線源数	number of sources 線源数	number of sources 線源数
13.3a Typical Initial activity of Co-60 source(optional) 13.3a　Co-60の代表的な初期放射能（任意）	TBq	TBq
13.3b Typical end of use activity of Co-60 source　(optional) 13.3b　Co-75源の最大エネルギー（任意）	TBq	TBq
13.4 Number of units of radiation generators (X-ray units) 13.4　放射線発生装置のユニット数（X線）	number of units ユニット数	number of units ユニット数
13.4a Typical MV of radiation generator (X-ray units) (optional) 13.4a 代表的な放射線発生装置の電圧（X線）（任意）	MV	MV

Question / 質問	Year／年	
	2020	2021
13.4b Typical mA of radiation generator (X-ray units) (optional) 13.4b 代表的な放射線発生装置の電流（X線）（任意）	mA	mA
14. Company procedures 14. 貴社内での手続		
14.1 Are there company investigation levels for occupational exposure? 14.1 職業被ばくに関して、社内での調査レベルはありますか。	☐ Yes ☐ No ☐ はい ☐ いいえ	
14.1a If yes, what is the investigation level per month? 14.1a 14.1で「はい」と回答した場合、その調査レベル（1月あたりの個人被ばく線量）を教えてください。	mSv	mSv
14.2 Does your company perform occupational radiation protection related assessment of radiographers? 14.2 貴社は放射線技への職業被ばくに関してアセスメントを実施していますか。	☐ Yes ☐ No ☐ はい ☐ いいえ	
14.2a If yes, approximately how many times per year would a radiographer be assessed by your company? 14.2a 14.2で「はい」と回答した場合、放射線技師に対して年に何回程度アセスメントを実施していますか。	number of times per year 1年あたりの回数	number of times per year 1年あたりの回数
14.3 Does your company perform its own inspections for compliance to radiation safety standards and regulations? (optional) 14.3 貴社は放射線防護に関する独自のコンプライアンス調査を実施していますか （任意）。	☐ Yes ☐ No ☐ はい ☐ いいえ	
14.3a If yes, how many compliance inspections was held in a year? (optional)	number of inspections per year	number of inspections per year

Question / 質問	Year／年	
	2020	2021
14.3a 14.3で「はい」と回答した場合、年に何回程度コンプライアンス調査を実施していますか （任意）。	1年あたりの調査の実施回数	1年あたりの調査の実施回数
15. Dose information 15. 個人被ばく線量に関する情報		
15.1 Number of Occupationally Exposed Workers 15.1 職業被ばくを受けている作業者数	number of workers 作業者数	number of workers 作業者数
15.2 Number of films exposed in the year 15.2 年間のフィルム使用数	number of films フィルム使用数	number of films フィルム使用数
15.3 Annual collective Dose 15.3 年間の集団線量	man.mSv/year	man.mSv/year
15.4 Minimum detectable level 15.4 検出限界値	mSv	mSv
15.5 Please, indicate number of workers in dose ranges: 15.5 以下の個人被ばく線量の範囲ごとの作業者数をご記入ください		
Annual Dose < min detectable level 年間の個人被ばく線量が検出限界値未満	number of workers 作業者数	number of workers 作業者数
min detectable level≤ Annual Dose < 5 mSv 最小検出限界値≤ 年間の個人被ばく線量 < 1 mSv	number of workers 作業者数	number of workers 作業者数
1 mSv ≤ Annual Dose < 5 mSv	number of workers 作業者数	number of workers 作業者数

Question / 質問	Year／年	
	2020	2021
1 mSv ≦ 年間の個人被ばく線量 < 5 mSv		
5 mSv ≤ Annual Dose < 10 mSv 5 mSv ≦ 年間の個人被ばく線量 < 10 mSv	number of workers 作業者数	number of workers 作業者数
10 mSv ≤ Annual Dose < 15 mSv 10 mSv ≦ 年間の個人被ばく線量 < 15 mSv	number of workers 作業者数	number of workers 作業者数
15 mSv ≤ Annual Dose < 20 mSv 15 mSv ≦ 年間の個人被ばく線量 < 20 mSv	number of workers 作業者数	number of workers 作業者数
20 mSv ≤ Annual Dose < 30 mSv 20 mSv ≦ 年間の個人被ばく線量 < 30 mSv	number of workers 作業者数	number of workers 作業者数
30 mSv ≤	number of workers	number of workers

Question / 質問	Year／年	
	2020	2021
Annual Dose < 50 mSv 30 mSv ≤ 年間の個人被ばく線量 < 50 mSv	作業者数	作業者数
50 mSv ≤ Annual Dose 50 mSv ≤年間の個人被ばく線量	number of workers 作業者数	number of workers 作業者数
16. Accidents and incidents 16．事故及び異常事象		
16.1 Number of accidents or incidents with doses ≤ 20mSv 16.1 個人被ばく線量が20mSv以下の事故または異常事象数	number of accidents/incidents 事故または異常事象の数	number of accidents/incidents 事故または異常事象の数
16.2 Number of accidents or incidents with doses > 20mSv 16.2 個人被ばく線量が20mSvを超える事故または異常事象数	number of accidents/incidents 事故または異常事象の数	number of accidents/incidents 事故または異常事象の数
17. Information on radiographers (optional) 17．放射線技師に関する情報（任意）		
Representative radiographer I 代表的な放射線技師 1		
17.1 Hp (10) dose 17.1　個人線量当量（Hp(10)）	mSv	mSv
17.1a Number of films in a year 17.1a　年間のフィルム使用数	Number of films フィルム使用数	Number of films フィルム使用数
17.1b Does he/she have valid radiation protection qualification (optional)?	☐ Yes ☐ No	☐ Yes ☐ No

Question / 質問	Year／年	
	2020	2021
17.1b この方は放射線防護に関する有効な資格を有していますか（任意）。	☐ はい ☐ いいえ	☐ はい ☐ いいえ
Representative radiographer II 代表的な放射線技師２		
17.2 Hp (10) dose 17.2　個人線量当量（Hp(10)）	mSv	mSv
17.2a Number of films in a year 17.2a　年間のフィルム使用数	Number of films フィルム使用数	Number of films フィルム使用数
17.2b Does he/she have valid radiation protection qualification (optional)? 17.2b この方は放射線防護に関する有効な資格を有していますか（任意）。	☐ Yes ☐ No ☐ はい ☐ いいえ	☐ Yes ☐ No ☐ はい ☐ いいえ
Representative radiographer III 代表的な放射線技師３		
17.3 Hp (10) dose 17.2　個人線量当量（Hp(10)）	mSv	mSv
17.3a Number of films in a year 17.3a　年間のフィルム使用数	Number of films フィルム使用数	Number of films フィルム使用数
17.3b Does he/she have valid radiation protection qualification (optional)? 17.3b この方は放射線防護に関する有効な資格を有していますか（任意）。	☐ Yes ☐ No ☐ はい ☐ いいえ	☐ Yes ☐ No ☐ はい ☐ いいえ

17. Your personal information

17．回答者に関する情報

Name and Surname　氏名

Company/Institution　会社等の名称

Job title or position　役職等

Town/city　都道府県及び市町村等

E-mail:　メールアドレス

Country　国

18. I agree to include the data from the questionnaire (questions 13-17) to the IAEA ISEMIR-IR database*

Signature

18．本質問（質問13～17）に対する回答をIAEA　ISEMIR-IRのデータベースにおいて使用することに同意いたします。

署名

* All information will be treated as strictly confidential by the IAEA. Only anonymised and aggregated data will be made available.

*
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