

**International Conference on Occupational Radiation Protection:
Strengthening Radiation Protection of Workers –Twenty Years of Progress
and the Way Forward**

Contribution ID: 222

Type: **Poster**

Current status of individual dosimetric monitoring in Senegal

Abstract

In Senegal, workers exposed to ionizing radiation are increasing every year; hence the importance of an accessible dosimetric monitoring system. Only about fifty workers are monitored by foreign dosimetry laboratories. To facilitate access to dosimetric monitoring of workers exposed to ionizing radiation in SENEGAL, the Autorité sénégalaise de Radioprotection et de Sûreté nucléaire (ARSN) has set up, since November 2014, an external dosimetry laboratory using the Landauer's OSL microstar reader. Based on OSL technology, the emitted light by the OSL detector after stimulation by light emitting diodes is proportional to its exposed irradiation dose.

The aim of the present work is to study and describe the current situation of individual dose exposition of 700 workers in both the medical sector (radiodiagnostic, fluoroscopy, Computed Tomography, radiotherapy) and industrial sector (NDT, well logging industries, mining).

The analysis of the external exposure by field of activity have also been studied. Results have shown that the average annual effective dose is 0.46 mSv in the medical sector (80% of the total monitored) and 1.1 mSv in the industrial sector (20% of the total monitored).

This study contributes to the existing works to promote a more comprehensive personal monitoring service for OEWs. Continued analysis of occupational doses should be an integral component of institutional radiation safety programs in SENEGAL.

Keywords : Doses, occupational exposed workers, OSL, ionizing radiation

Name of Member State/Organization

SENEGAL

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Session Classification: Session 2. Monitoring and dose assessment of occupational radiation exposures

Track Classification: 3. Monitoring and dose assessment of occupational radiation exposures