

IAS-SS05 / Rule

Legal Compliance for work with lasers

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1. Preamble

Works with laser light sources can be separated into two distinct areas:

1. Works with open laser light sources
2. Works with enclosed laser light sources

The necessary measures for works in both areas are covered in the European Laser Safety Norm IEC/EN 60825-1. For the time being there is no Austrian Law regulating laser safety directly. Hence occupational safety for the professional use of lasers is regulated by the Austrian ASchG (ArbeitnehmerInnenschutzgesetz) and the Arbeitsmittelverordnung. The Austrian guide line ÖNORM S-1100-1 describes the official requirements for the training of approved laser safety officers for specific laser applications.

This rule describes roles, responsibilities and work flows associated with legal compliance of works with laser light sources at IST Austria.

2. Roles and Responsibilities

2.1 Roles

President	Legal representative of IST Austria
Professor / Assistant Professor	Leader of research groups at IST Austria
Scientific Service Unit (SSU)	Scientific support group
SSU manager	Leader of an SSU at IST Austria
SSU staff	Laboratory technicians, laboratory manager, etc
Scientific staff	PhD students and Post-Docs in research groups and Staff Scientists in SSU
Non-scientific staff	lab technicians in research groups and SSU staff
Project leader	Professor / Assistant Professor or SSU manager who perform projects with laser light sources within their groups/units
Laser Safety Officer	Appointed by the President or an authorized representative of the President for issues regarding laser safety

Environment, health and safety (EHS) office	central office concerned with all environment, health and safety related issues on campus
Safety committee	Body of all IST Austria employees and contractors that are concerned with health and safety issues on campus

2.2 Responsibilities

President	<p>IST Austria is the official operator of all laser facilities on campus.</p> <p>The President or an authorized representative of the President is responsible for full compliance to the legislation. All resulting duties according to the IEC/EN 60825-1 S-1100-1 are delegated to the appointed safety officers for open or enclosed laser light sources, respectively.</p>
Laser Safety Officer (enclosed or open)	<p>Consults the responsible parties in the safe use of laser equipment, including appropriate protective measures and labeling.</p> <p>Responsibility for registration with authorities.</p> <p>Reviews working procedures with laser light sources and informs the President or an authorized representative of the President about safety violations.</p> <p>Responsibility for appropriate training and the corresponding documentation</p> <p>Responsibility to keep up to date with all possible changes in the relevant legislation</p>
Professor / Assistant Professor / SSU manager	<p>Assesses risks of all planned works with laser equipment within their working group.</p> <p>Responsibility to report all planned works and changes with laser equipment to laser safety officer.</p> <p>See →Project leader</p>
Project leader	<p>Responsibility to implement protective measures for equipment and to ensure that all project participants have the necessary knowledge to comply with all relevant rules and guidelines.</p>

3. Processes

3.1 Registration and assessment of works with laser light sources

3.1.1 Central registration

All faculty candidates are asked about their needs for use of laser light sources already during the first stages of the recruiting process. During the negotiation process candidates are briefed about the Austrian legislation concerning laser light sources and the likely timeframe for getting permissions for their particular type of work. After a candidate accepted her/his offer the detailed evaluation process as described above begins.

Any individual at IST Austria who is planning to work with laser light sources must be aware of how the planned experiments are graded in respect to the legislation and what the necessary measures for full compliance are. Scientific and non-scientific staff must consult their respective Professor / Assistant Professor / SSU manager before taking up any works with laser light sources. If a Professor / Assistant Professor / SSU manager decides to take up works with laser light sources s/he must contact the responsible officer for laser safety prior to uptake of any works.

3.1.2 Risk assessment

The safety officer together with the EHS office will help with the classification of the planned experiments including necessary safety measures and sufficient labelling for the laboratory area, personal safety equipment, requirements for monitoring of personnel. For procedures that have not been employed on campus before, normally an external expert is consulted. The experimental works can only be taken up once all necessary safety measures have been installed.

3.1.3 Registration of works with the authorities

Any new equipment and instrumentation including laser light sources must be registered with the authorities. Based on the evaluation described above registrations are prepared by the EHS office together with the laser safety officer. The laser safety officer is responsible for the content of the registration. The registration is then presented to an external consultant and the authorities of Lower Austria which are evaluating safety measures for any equipment on site and give their final approval for works with the respective instrumentation.

3.2 Training measures

The project leader is responsible to inform their incoming scientific and non-scientific staff as well as visiting scientists and guests about ongoing works with lasers. Project leaders are responsible to ensure that all project participants have the necessary knowledge of how to handle laser light sources and how to comply with all relevant rules and guidelines. The project leader must guide all project participants to the respective laser safety officer to receive appropriate training and is responsible to ensure that only trained personnel is involved in works with laser light sources.

The laser safety officer is responsible for appropriate training and the corresponding documentation.

Before taking up any work with instruments including lasers IST Austria scientific and non-scientific staff as well as visitors are informed and trained about the safe usage of lasers. This training is documented in a separate online moodle course document and in PPMS booking system.

The laser safety officers and their substitutes have to receive the appropriate training according to ÖNORM S 1100-2.

3.3 Changes in legislation

The laser safety officers are responsible to keep up to date with all possible changes in the relevant legislation. This shall be ensured by Legal and Compliance function through regular update and monitoring of the regulatory / legislative framework.

Any relevant changes will be brought to the attention of all relevant IST Austria faculties and the President or an authorized representative of the President.

3.4 Compliance

The individual project leader is fully responsible for compliance during the execution of a particular project. If the laser safety officers realizes violations of any official rules, guidelines, or SOPs s/he has to inform the responsible project leader and the head of EHS about the violation. All non-compliant works must be stopped immediately. The head of EHS, the laser safety officer, and the responsible project leader must develop a strategy of how full compliance can be restored without undue delay. The implementation of this strategy lies with the project leader.

The laser safety officers must present the strategy to EHS. Once full compliance is achieved again, the laser safety officer informs EHS department and laser works can be up taken again.

In case of severe violations against laser safety measures, EHS informs the president or an authorized representative of the president. The laser safety officers must present the strategy to regain compliance to the president or an authorized representative of the

president. Once full compliance is achieved again EHS informs the president or the authorized representative.

The laser safety officers present an overview of relevant occurrences and changes with respect to laser safety in the regular IST Austria safety committee meetings. In addition, on an annual basis s/he reports the compliance status with respect to laser safety to the EHS office for the campus wide EHS compliance report. Laser safety trainings for all employees actively working with laser light sources are renewed on a yearly basis.

4. List of potential audits from public authorities

All laboratories at IST Austria could be audited by the local bodies concerned with employee protection or laser safety. Such audits are normally not announced and can happen at any given time.

In case of an audit concerning laser light sources the first contact persons are the laser safety officers or their substitutes. Together with the EHS office they will guide the audit procedures. If needed, they will guide the auditors to individual project leaders. IST Austria Professors, Assistant Professors, scientific or non-scientific staff should not give any type of documentation or grant access to the laboratories to the audit committee without prior approval by the laser safety officers and/or the EHS office.

The laser safety officers present an overview of relevant occurrences and changes with respect to laser safety in the regular IST Austria safety committee meetings.

For requirements for the use of hazardous substances, poisons, anesthetics and addictive drugs see IAS document 'Legal compliance for handling hazardous chemicals'.

5. Related Material

IEC/EN 60825-14 -Safety of laser products – part 14: A user's guide.

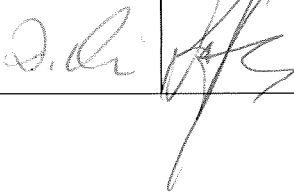

ÖNORM S 1100-1, ÖNORM S 1100-2

ArbeitnehmerInnenschutzgesetz – ASchG

Arbeitsmittelverordnung

Verordnung Optische Strahlung VOPST

Amendment Protocol:

Version Nr.	Editor	Review	Change	Effective Date	Approved
1.0	EkPa		First draft		
1.1	EkPa		Incorporated comments from SuWW		
1.2	MaNo		Restructured document		
1.21	MaNo		Added audit section		
1.3	DoMi	ToAs	Updated version	01.01.2018	RoGa
1.31	DoMi		Updated version	01.01.2019	
1.32	DoMi	ToAs	Expanded section 3.4 compliance + section 3.1.2 risk assessment	01.01.2020	
1.33	DoMi 	ToAs 	Updated section 3.2 training measures Updated section 3.4 compliance	01.01.2021	

Review Plan: bi-annually