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Lasers and laser-related equipment — Test methods for laser-induced damage threshold — Classification of medical beam delivery systems

Lasers et équipements associés aux lasers — Méthodes d'essai du seuil d'endommagement provoqué par laser — Classification des systèmes de transmission de faisceau médical

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Foreword

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Introduction

Fire in an operating room is the most dangerous situation for patient and staff. Besides electrosurgical devices and endoscopic light sources, even surgical lasers can be ignition sources for drapes, gowns and tracheal tubes. This risk was identified very early and several ISO standards for laser proof materials have been published. The medical beam delivery system itself, however, was out of focus. Due to the increasing market on the one hand and necessity for cost reduction in health care on the other hand fibres have come into the market with a risk of self-ignition of the core or cladding material. Furthermore with reinvention of fibre-applicator-systems for contact application or integrated diffusor systems they have an increased risk for self-ignition due to high absorption. This document elaborates reproducible test parameters for medical beam delivery systems.