

DRY LASER IMAGE PROCESSING

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Intoduction

Dry laser imaging refers to the processing of digital diagnostic images using laser systems that do not require chemical solutions and darkroom processing. In this process photothermography is used where the silver based photographic film after exposure is heated to develop the images.

The aspects that were considered in this assessment were technical performance, safety, efficiency, effectiveness and costs of the dry laser system as compared to the wet laser system.

Methodology

The methodology used was a review of the literature, technical information from suppliers as well as a local comparative costing study of the dry and wet laser.

Results and Conclusions

In terms of technical performance, image quality of the films on the dry laser was as good as that of the wet laser. No quality control checks on processing are required in this in comparison to the wet laser. The films could be stored for up to 30 years. Apart from the absence of darkroom and plumbing facilities for the dry laser, it also has smaller footprint. There is also savings in manpower since there need not be designated person for preparation of solutions, cleaning and maintenance, as well as to change the developer and fixer. The frequency of films loading is also less since there are two film magazines in the dry as compared to the wet laser. The wet laser also requires disposal of spent fixer and developer, and the dumping of wash water, which is not needed in the dry laser. There are also fewer chances of the films being damaged while processing in the dry as happens in the wet laser, so that repeat procedures are not necessary. The equipment has been found to be safe, and in addition, the potential hazards due to wet chemicals are also eliminated.

With respect to the costs, it was found that wet laser films were 16.1 % lower than the dry laser taking into account only consummable costs, without considering costs of equipment, maintenance and intangibles. Apart from this, there are also costs involved in setting up a darkroom, plumbing costs and the like. If all these are considered, the cost difference is narrowed. Further, manpower costs and effects on environment also to be considered.

A study of the local situation revealed that storage, handling and disposal of used chemicals were not always in accordance with standards. In addition, low water pressure and poor water uality posed problems.

Currently, one brand-Immation is well established while another-Agfa has just been launched. Consummables for these are brand specific.

Recommendations

In conclusion, dry laser is an acceptable technology and should be considered for all future purchases.