

Safety and health alert

04/01 Problems with concrete cutting saw blades

Incident

Significant Incident Summary 1/2001 advised of the death of a worker while operating a concrete cutting saw on an unstable surface. This Significant Incident Summary supplements the information provided in SIS 1/2001 by highlighting further concerns with the operation of concrete cutting saws.

Factors

Additional information received has focused attention on the quality of saw blades and the quality of training of operators.

Manufacturers of cutting saws recommend only approved saw blades that are laser welded. These blades usually cost around \$600 and are very durable. While there are cheaper bronze welded types of blades on the market, these are not as durable and can come apart under rotation or from vibration.

Cutting blades typically have diamond cutting surfaces to improve their cutting performance. Once the top layer of diamond has worn away, the only cutting point is the steel of the blade. Higher pressure applied by the operator when making a cut creates a much less safe situation.

Laser welded blades have diamond segments attached to the steel centre (core) with a laser beam which fuses the two pieces together. A laser-welded blade can withstand more stress and heat than a conventional braze bond. Bronze welded (brazed) types of blades are held together by solder. Under intense rotation and vibration the brazing (solder) can detach from the core.

Many of the problems associated with saw blade damage are compounded by inadequately trained operators using or being provided with blades that are not designed for the task, for example using a general purpose blade for an extended period on hard brick.

Recommendations

1. Use only saw blades recommended by the manufacturer.
2. Use blades manufactured to suit the type of concrete being cut. Manufacturers can custom design blades appropriate for unusual cuts.
3. Obtain information about the safe operation of saws and correct type of blade from the manufacturer or supplier.
4. Ensure concrete saw operators receive specialised training and an appropriate level of supervision. A number of providers offer such training.

Further Information

Further information can be obtained from the WorkSafe internet site www.worksafe.wa.gov.au, or by contacting customer service on 1300 307 877 or email: safety@docep.wa.gov.au.

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