

# Break-up of overheated steel diamond tipped cutting blade

## WHAT HAPPENED

An incident occurred where a diamond disc cutter blade overheated causing elements of the blade to break up during operation. The blade (name: Piranha, supplier: Diamond Master) was being used to dry cut a redundant steel gas main for disposal when the tips of the blade disintegrated. The blade lost around 50% of its teeth but fortunately there were no injuries.

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Following investigation, it was identified that although the blade was correctly specified for the material being cut, it was being used without lubrication and this caused the blade to overheat and subsequently fail. Further investigation highlighted that personnel were unaware of the need for lubricant with this type of blade, nor were there any manufacturer's instructions available to identify this requirement.

## LEARNING POINTS / ACTIONS TAKEN

If similar equipment is being used on your site, you should:

- 1) Ensure that equipment instructions are available on site and if not seek advice from the supplier before using the equipment.
- 2) Managers/Supervisors must identify the need to use lubricant for cutting operations and ensure operatives are made aware of these requirements.
- 3) Operatives must stop and check requirements for lubricant if they are in any doubt.

Remember, if the cutting materials like concrete, sandstone, granite or brick, the dust generated is likely to contain significant levels of respirable crystalline silica that can damage your health if exposure is excessive and prolonged. Lubrication must be used in any case to reduce this potential hazard.

Readers should also refer to HSE Construction Information Sheet No 54 – “Dust control on concrete cutting saws used in the construction industry”.

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**LOCATION:**  
**ACTIVITY:**  
**SUB ACTIVITY:**

**CONSTRUCTION/DELIVERY SITE**  
**PRODUCTION AND PROCESSING**  
**AGGREGATE PROCESSING**

**ALERT STATUS:**  
**DATE ISSUED:**  
**INCIDENT No:**

**Normal**  
**03/04/2009**  
**00223**