



IRATA SAFETY BULLETIN SB20

'Near Miss' Rope melted by heat from a lamp

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Status	Report following operating members' reports

1. The incident

Working lines were rigged for cleaning purposes through a 600mm dia. access hole into a 30m high boiler which had several lower access holes. To illuminate the worksite, a 110 volt halogen lamp was positioned in the opening, but clear of all ropes. The surrounding area was taped off, but un-manned. A few hours later a team of rope access technicians working inside the boiler noticed a rope fall from above, followed shortly afterwards by the second rope. An investigation found that a carpet and rope protector were smouldering and burnt and had melted through both ropes. It appeared that the light had either fallen over, or been knocked over, ending up face down onto the ropes.

2. Incident analysis

2.1 The L3 supervisor insists the lamp was secured appropriately. An attempt to recreate the incident by pulling the hauling/ rescue ropes rapidly from below was unable to cause the lamp to end up face down on the protector.

2.2 In the absence of any other explanation it is possible that an unauthorised site person monitoring work, had interfered with the ropes securing the lamp resulting in the ropes melting.

2.3 During a re-construction with the 110v halogen lamp face down on the rope protector, the carpet protecting against the edge damage began to melt in 5-6 minutes. This smouldered before the velcro fastening on the rope protector melted and began to smoulder. The canvas then began to smoke and within 20 minutes of starting the test the ropes has melted.

3. Control measures

- Permit system which informs all site employees of work in progress and exclusion zone.
- Documented company procedure and pre-work briefing / tool box talk for all operatives involved in the work including precautions to protect working lines from any heat source.
- More secure anchor area exclusion zone (ICOP 2.11.9.3) where rigging and lighting is positioned, such as physical barriers, warning signs, and sentry or supervisor to prevent unauthorised access and monitor work progress.
- Alternative lighting which emits very little heat e.g. the company currently uses 38W 2D lights, secured so they do not foul the ropes and rigging in any way.
- Modified guards on lamps (the guards on the original lamp only extended approximately 10cm from the lighting element).
- Heat retardant padding and or kevlar heat resistant rope protectors for edge protection.
- Fire extinguishers to be on hand at each work area in case of fire.

4. See also Safety Bulletin 18 **Near Miss Failure of Anchor Lines** relating to situations where failure of both anchor lines is possible. http://www.irata.org/safety_notices.htm