

Spindle Terminal Arcing

Issue Found on ZX4 spindle ring connection box - constantly producing module alarms on spindles

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Comments

On Monday I was onsite and the operators were changing the two 10mm tools over and after resetting the machine it was constantly producing module alarms on spindles. I was asked to have a quick look to see if anything was obvious. On the inverter the alarm OCA for overcurrent on accel was being produced every time the machine went to trimstart. Tried switching off spindle 3 and 7 to see if it was one of them. Removed the covers to check the relay and clean out. Both relays looked good. Ive checked the motor terminal box and 3phase connections secure.

I remembered the ZX4 that went to Sideys a few years ago that similar issues and I found it was the din rail connectors exposed on one side shorting on the metal holder so I decided to take these off to check (on Spindle 7). This is where I have found the burn marks on the last one and where its been against the metal plate. Its unusual that it has done this through the connector. For now, I have used the earth connector as the inside one beside the metal plate to add an extra buffer. The other connectors look ok. Everything secured back up and the machine restarted first time.



...Discovery credited to Andrew Tweed