

Maintenance of the flow meter to prevent un-noticed false reading.

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Cooling of magnet coil by LCW (Low Conductivity Water) is among basic things of most particle accelerator facilities. Magnet protection by water flow rate will fail, if flow meters fraud, like reading stuck to “good” value despite reduced or even stopped flow. We have suffered from false reading from time to time, because we just checked face value during our routine bi-weekly maintenance rounds. Recently, we add new check items; for example, stick, abnormal noise, vibration to the bi-weekly check menu. Further, we add an active, somewhat interventional, check method by closing / opening relevant value and monitoring change of reading, in about semi-annual frequency. We evaluate the condition of the flow meter according these items. As a result, it becomes easy for us to understand the condition of the flow meter. We will keep on monitoring these items in future.

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