



Cooling Meeting 16 July 2008

ECAL Laser cooling

To solve problems with temperature stability & cooling water particulates:-

Instead of using rack cooling system 'mixed water' supply

- Dedicated, independent ECAL laser cooling circuit
- Primary circuit to heat exchanger fed from chilled water supply
- Secondary circuit to ECAL lasers filled with clean, domestic water
- Two circulation pumps in parallel, with isolation valves
- Heat exchanger recuperated from test beam set-up
- Pumping station & control system adjacent to laser enclosure



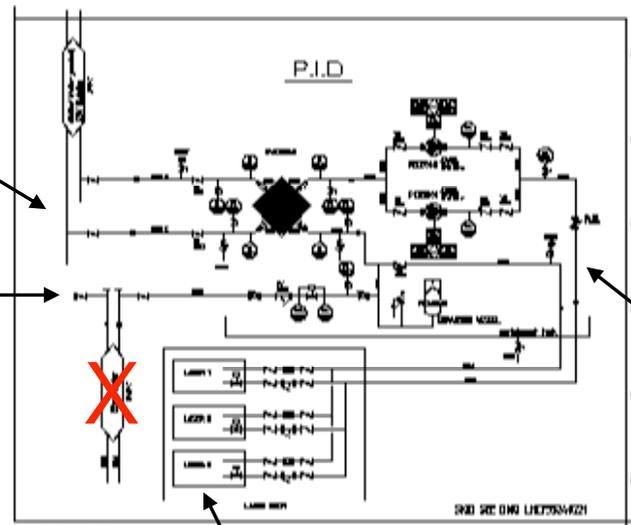
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Hydraulic circuit

Chilled water primary circuit,
fed from PM54

Feed from fresh water supply,
not 'mixed water'



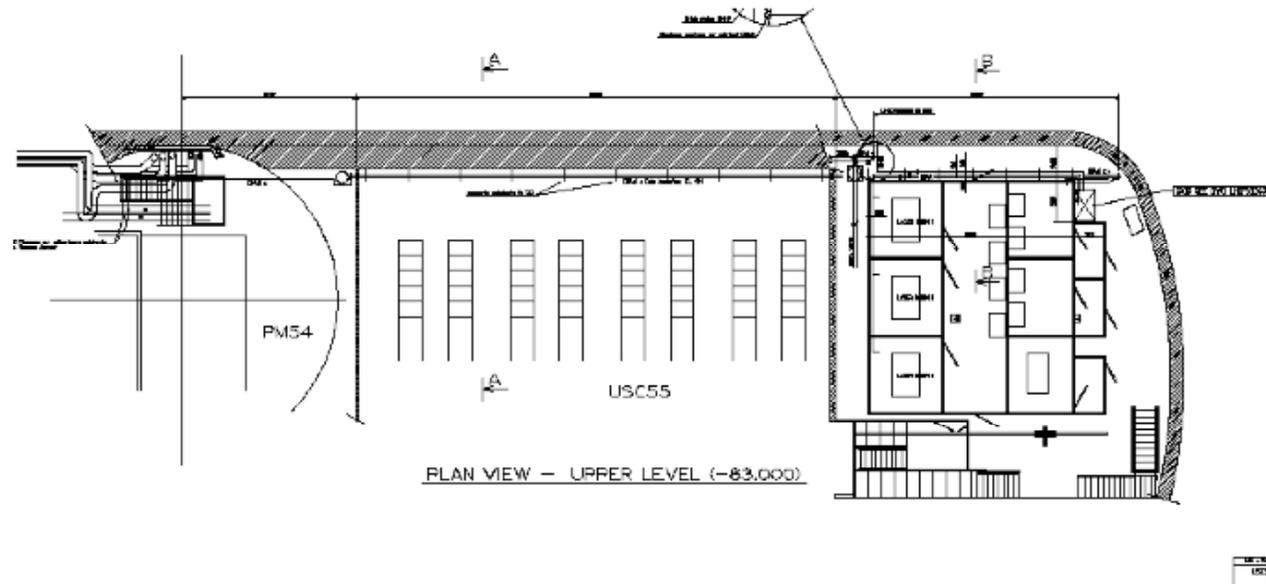
Clean water secondary circuit

ECAL lasers



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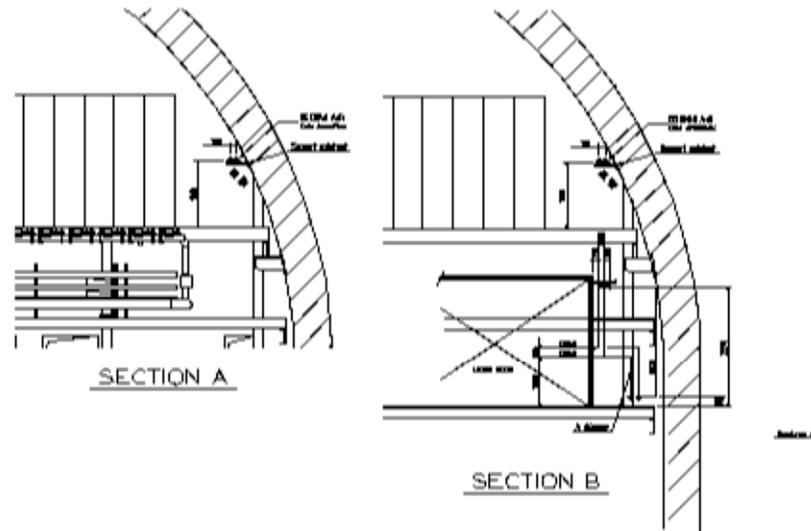


Insulated chilled water pipes fed from PM54, along side wall of USC55 at S2 level, to end of cavern



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S2 level

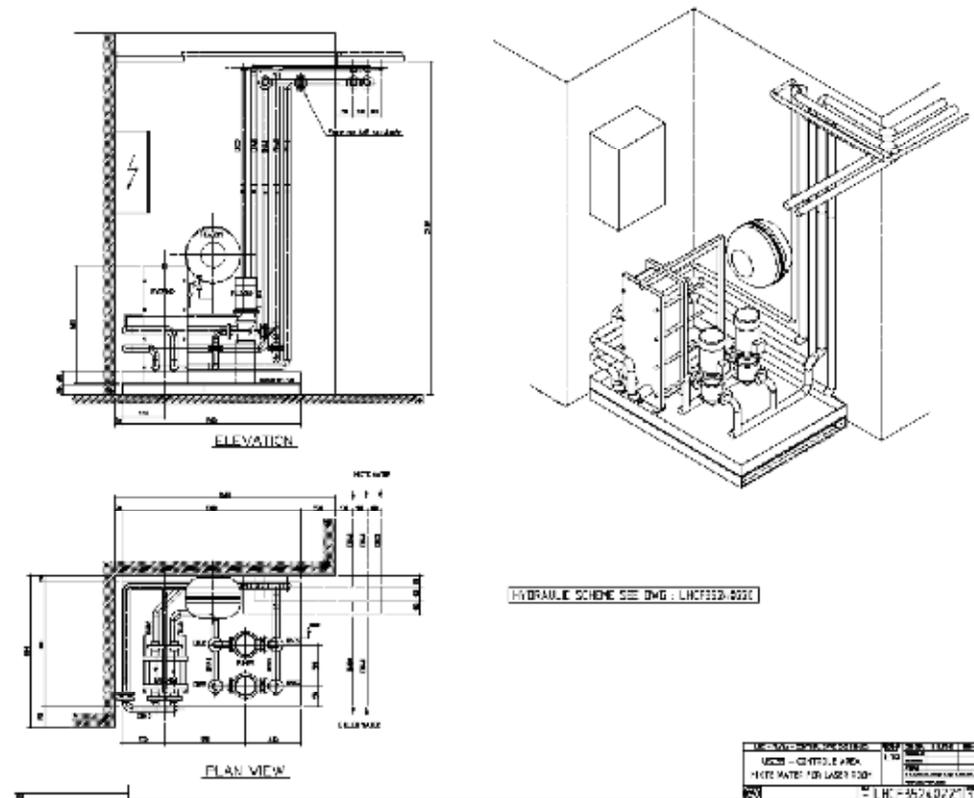
Laser room level

Gas room, S1 level



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Pumping station at corner of laser room



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Current Status:

Pipe work for chilled water supply from PM54 to end of USC55 completed
Armaflex insulation of USC straight section almost completed
Connection to chilled water pipe work in PM54 has been made
Fresh water feeder line is in place, but still needs attachment brackets
Some drainage pipes in place
Work started on pumping station (fabrication of base plate/drip tray)
Work order for electrical control box signed