

Personal cooling garment system

Salient features of the technology:

- Personal cooling garment (PCG) has been designed and developed for auxiliary body cooling. The garment is useful for maintaining comfortable microclimate around the human body.
- The PCG is a jacket-like enclosure system creates an interior space of microclimate for auxiliary body cooling.
- The PCG is attached with a small coolant reservoir that can be clipped on the hip belt for easy carrying.
- Re-circulation of the coolant is powered by a small submersible, battery operated pump immersed in the coolant reservoir.
- Low temperature of the coolant creates a microclimate condition that promotes heat transfer between the wearer's body and circulating fluid.
- Easy to use and maintain PCG (filled with coolant) is light weight (~0.75 kg). The reservoir bottle and pump accessories had an additional weight of ~1 kg.
- Caution is needed if the garment is not frequently used. The coolant needs to be pushed out of the tubing for hygienic reasons. Effective and use time of the garment depend on the inlet temperature of the coolant.
- The product has to be tested in the work environment. Validation under process.
- Indian Patent application has been filed with application no.- 2746/DEL/2012.
- This technology has been developed by NIOH, Ahemdabad (an ICMR Institute).