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POOL BOILING INVESTIGATION OF Al_2O_3/WATER NANOFLUID ON FLAT PLATE

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SUMMARY

Nucleate pool boiling of Al_2O_3 based aqueous nanofluid on flat heater has been studied experimentally. Reduction in nucleate boiling heat transfer has been observed at three volume fraction of nanoparticles (0.1, 0.05, 0.02%.vol). Results showed that the rate of heat transfer falls with solid concentration. Also enhancement in critical heat flux (CHF) has been observed .The CHF enhancement increases with volume fraction of nanofluids. In addition, the contact angle of the drop on basic surface before boiling is bigger than that on nanofluid boiled surface.