

1. Record Nr.	UNINA990009155550403321
Autore	Canan, Michael J.
Titolo	Qualified retirement plans : 1999 student edition / Michael J. Canan
Pubbl/distr/stampa	St. Paul : West group, 1998
ISBN	0314231676
Descrizione fisica	LI, 1775 p. ; 26 cm
Locazione	DEC
Collocazione	DPR 30-243
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
2. Record Nr.	UNINA9910714186103321
Autore	Kedzierski Mark A
Titolo	Influence of concentration and additives on R123/paraffinic material oil boiling heat transfer performance / / Mark A. Kedzierski, D.H. Han
Pubbl/distr/stampa	[Gaithersburg, MD] : , : U.S. Dept. of Commerce, National Institute of Standards and Technology, , [2006]
Descrizione fisica	1 online resource (42 pages) : illustrations
Collana	NISTIR ; ; 7336
Altri autori (Persone)	HanD. H
Soggetti	Heat - Transmission Lubrication and lubricants
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"September 2006." Contributed record: Metadata reviewed, not verified. Some fields updated by batch processes. Title from page [1], viewed March 5, 2007.
Nota di bibliografia	Includes bibliographical references (page 12).

## Sommario/riassunto

This report investigates the effect that oil concentration had on the boiling performance of an R123/paraffinic mineral oil mixture on a roughened, horizontal flat surface. For all compositions (0.5 %, 1 %, and 2 %), the lubricant caused a heat transfer degradation relative to the heat transfer of pure R123 of between 2 % and 70 % for the range of measured heat fluxes. The heat transfer degradation was shown to increase with lubricant mass fraction. The minimum heat transfer degradation for each mixture ranged between 2 % and 12 % and occurred at approximately 20 kW/m<sup>2</sup>. For a given composition, the heat transfer degradation increased as the heat flux increased from roughly 20 kW/m<sup>2</sup> to 90 kW/m<sup>2</sup>. In addition, the effect of two trial additives on the pool boiling heat transfer of an R123/paraffinic mineral oil mixture was examined in order to test the validity of a theory for choosing oil additives to enhance boiling performance. The verification tests were inconclusive. More research with lubricants and additives with greater differences in surface tensions is required to develop a more rigorous and quantifiable theory for designing additives that improve boiling heat transfer.

---