



"CLEANER PRODUCTION INITIATIVES AND CHALLENGES FOR A SUSTAINABLE WORLD"

Determination of the Amount of Emitted Carbon Dioxide Due to the Construction and Operation of Refrigerating Cycle with Ammonia Vapor Compression and Evaporation Temperature between -30°C and 5°C

P. S. G. Carvalho ^a, M. M. Pimenta ^b

a. Universidade Paulista, São Paulo, psgc@uol.com.br

b. Escola Politécnica da Universidade de São Paulo. Departamento de engenharia mecânica, mmpimenta@uol.com.br

Abstract

The refrigerating cycle for ammonia vapor compression has its use very spread out, because it can generate very low temperatures and operate in some temperatures of evaporation. The present work aims at to quantify the emitted carbon dioxide due to the construction and operation of a refrigerating cycle for ammonia vapor compression that operates using the hydroelectricity. As Costa (1982) the temperature of evaporation must be enters 5 °C the 15 °C inferior to the cooled environment. It adopts the case more criticize considering environment cooled in the -20 band °C the 5 °C implying temperature of evaporation between -35 °C and -10 °C. In the development of this article it will be used the computational program Engineering Equation Solver (E.E.S) and methodology developed for the authors.

Keywords: refrigerating systems; conservation of fish; refrigerating cycle for absorption.