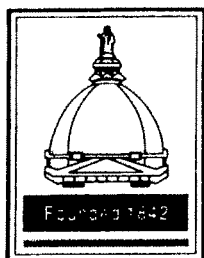


AEROSPACE & MECHANICAL ENGINEERING



2009 COLLOQUIUM 2010 SEMINARS ARE OPEN TO THE PUBLIC

INFORMAL COFFEE PERIOD BEFORE THE SEMINAR IN ROOM 365, ENGR. BLDG.
UNIVERSITY OF NOTRE DAME, NOTRE DAME, INDIANA 46556

SPEAKER: **Dr. J. Jeswiet P.Eng**
Professor of Mechanical Engineering
Department of Mechanical and Materials Engineering
Queen's University, Kingston, Ontario, Canada

TOPIC: **CARBON EMISSIONS IN MANUFACTURING AND DESIGN**

DATE: Tuesday, April 13, 2010

TIME: 3:30 p.m.

PLACE: 138 DeBartolo Hall

ABSTRACT

The presentation will review the need for more energy in manufacturing as products become more complex. The associated negative effect of carbon emissions with increased energy use will be discussed. The connection between electrical energy use from local power grids and the carbon emission output, if the local power grid uses fossil fuels, will be stressed. An example of a tier I manufacturer will be used.

Calculating a product's carbon footprint will be reviewed and the disparity between the results for carbon footprint calculators will be presented. The CES (carbon emission signature) method of calculating a carbon footprint will be presented.

The energy needs for manufacturing processes, as envisaged by Gutowski, will be included in the discussion. Recent work with the compressed air systems of two local SME's will be included.

If time is available, recent work in single point incremental forming will be discussed.

NOTE: *If you are interested in meeting individually with
Dr. Jeswiet, please contact Evelyn at 631-5431*