CARLETON UNIVERSITY

Department of Mechanical and Aerospace Engineering MASTER'S THESIS EXAMINATION

CANDIDATE:

Danial Molavitabrizi

Bachelor of Engineering, Iran Univ of Sci & Tech, 2015

DATE:

Thursday August 23, 2018, 10:00 3124 Mackenzie Building

THESIS TITLE:

Design and Analysis of Novel Metallic Structural Concepts for Lightweight Freight

Railcars

EXAMINATION BOARD:

Internal Examiner

Heng-Aik Khoo, Department of Civil and

(In Person)

Environmental Engineering

Member of Department

Henry Saari, Mechanical & Aerospace Engineerin

(In Person)

Member of Department

Xin Wang, In Place of University of Ottawa

(In Person)

Thesis Supervisor

Jeremy Laliberte, Mechanical & Aerospace

(In Person)

Engineering

Chair/Director of Department

Ronald Miller

(Ex-officio)

Dean of Faculty

or Designate

Fred Afagh

(Ex-officio)

Dean, Faculty of Graduate and Matthias Neufang

(Ex-officio)

Postdoctoral Affairs

Ronald Miller, Chair/Director of Department or Designate Department of Mechanical and Aerospace Engineering