

Master Thesis Brief Description

Thesis Title	Life Cycle Assessment of Steel Production Process
Programme of Studies	MSc in Energy Systems and the Built Environment
Course	MES 580 Master Thesis
Area of Study	Computational Building Physics – Life Cycle Assessment
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Supervisory Committee	Dr. George Karagiorgis, Assoc. Professor, Mechanical Engineering Department Dr. Byron Ioannou, Ass. Professor, Architectural Department
Semester	Spring Semester 2016
Short Description	The iron and steel industry a highly energy-intensive, is one of the pillar industries globally and steel is a required material in the economic development of the producer countries. The iron and steel industries have been suffering a major crisis in the recent years, and they are considered to be under high economic stake. It is inadequate to attribute to only one factor that leads to the suffering, but the iron and steel industry must get improved and perfected. Although the World Steel Association provides detailed and accurate inventory data about steel production, this needs update and improvement. The purpose of this study is to conduct a life cycle assessment (LCA) of steel production process in one plant as an example, assessing energy consumption and environmental load.