Second Laureate
Applied Research

Project title: **Design And Development of Coupling Code System**

Researchers: **Seyed Amir Hossein Feghhi(Ph.D.),**
Saeed Jafarikia(M.Sc.)

Abstract:

Assessment of elemental evolutions in a power plant fuel and evaluation of its influence on operational parameters during different working cycles is an important issue concerning power plant design, fuel consumption management as well as economic efficiency analysis studies, which require the utilization of a validated engineering code system. In this work an engineering code system for integrated simulation of fuel consumption based upon mathematical techniques has been developed. In order to create a fully integrated, well validated fuel consumption calculation software, elemental evolution capabilities is accommodated for. This software has the capability of using different calculation schemes. The accuracy and precision of the implemented algorithms to estimate the fuel consumption parameters are demonstrated by validation against reliable benchmark problem analyses.