



Aspen Hysys and Chemical Engineering

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Abstract— Aspen Hysys software is one of the most widely used software with a strong database, which has the ability to solve dynamic, chemical, etc. problems; Also, this software can acceptably predict the properties of many materials that are not available in its database, and also has single operation tools for accurate simulations; Therefore, many side costs can be identified before the establishment of a project and they can be optimized in the best possible way to achieve good performance, so this software can be considered one of the most important chemical engineering software.

Keywords: Thermodynamics, Aspen Hysys, Case study, Matlab

I. INTRODUCTION

With the growth of computer and informatics basics, the use of this tool in various sciences has become very important. The role of the computer in engineering sciences is quite evident and it seems very difficult to learn these sciences without using this tool, meanwhile, chemical engineering is not an exception to this rule and considering the high volume of calculations in this field and their difficulty and time-consuming nature. It is necessary for students and experts in this field to be familiar with computers and related software. In recent years, numerical software is widely used to solve educational problems in chemical engineering (process control, kinetics and design of chemical reactors, thermodynamics, etc.).

II. THE METHOD OF PREPARING THE ARTICLE

We have tried to have an article using the available information that has been obtained so far and for several reasons that are clear to everyone; Using the articles and books of other thinkers to obtain information and also to propose new ideas requires that we have access to these sources, which is one of the fast methods nowadays, which is to look for these sources in reliable websites and databases. let's look Of course, the necessary validation must be done for this so that the obtained information has sufficient validity.

III. FINDINGS

Simulations have been used as a basis for equipment dimensions, cost estimation and process optimization. Therefore, choosing the right software can be considered one of the most important parts of every engineer's work, because the selected software must have the necessary comprehensiveness. and have a strong database to give us the necessary credit.

In many cases, we have seen that many engineers have chosen software that has given them the answer with great difficulty, when they could have easily solved the problem by