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**CUSTOMIZING AUTOCAD FOR  
PLANT LAYOUT DESIGN**

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**CUSTOMIZING AUTOCAD FOR PLANT LAYOUT DESIGN**

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### ABSTRACT

By examining about the plant layout design , during this book it achieved through Autocad customization .

Generally layout design is included and other designs like i) product design ii) schedule design iii) process design , which it will has be to examine more, further. Layout design is done in order to help on the best layout ( orientation) of the equipment in a factory area and minimizes the production time ( and obviously the production cost/unit ) of the production goods.

To achieve the plant layout some regulations has to be written down from the beginning of design and to be followed. Are depending to the method which will has to be select to do this. The design has the following methods I) Theoretical method and ii) Graphical method but nowadays both can be done together by hand or with aid of computer inside special programs that have been design for such purposes.

This project is trying to make the plant layout design inside Autocad by customizing it's MENUS. The modified menu give some sketches of machines and departments which used in a created area of the mechanical factory.

## INTRODUCTION

As the book going on it will have to analyze everything that has to do with the plant layout. Plant layout is a problem that can be found in some large industrial places were many factors can take place for the efficient production. To solve this problem some assumptions has to be taken in order to get the optimum solution and also same steps also has to be followed during final evaluation.

### i)Formulation of the problem:

Formulation of the problem means that the previous situation (if any) has to be found in order to write what it happened and what it must not happen later on but also what would be done to have as better , an improvement or optimum solution.

### ii)Analysis of the problem:

Usually the main problem after analyzing the solution, is the transportation cost. This cost has to do with the rectilinear distances between the machines or departments but also the cost of moving goods from one place to another (by hands, by fork-lift, by cranes, from robotics e.t.c.)

### iii)Search for alternative solutions:

Now the creativity has to work on, in order to find some good solutions the main problem. Obviously sometimes, would found many alternative solutions and may be all very good. But after the problem analysis done the analysis of the several solution also must be done to find their advantages and disadvantages of each one.

### iv)Selection of the solution:

This is the most critical part of the previous steps .The solutions that was found as the best must be also the optimum for the specific situation. Selecting the wrong solution then later sometimes the production efficiency will drop and also the average expenses will increase.

### v)Specification of the solution:

After the correct selection of the optimum solution must specify what will be expected of from the solution be doing.

These can be done theoretically through assumptions and formulas but also now this can be done from computers. Theoretical or graphical methods are using formulas and models in every plant layout problem. But now computer aided methods are faster, saving time and many but also can work with more solutions than human mind can think in such time. For example in a small problem of 6 departments there 720 !! possible solutions and can humans find them all ?? But how many can be found in a problem of 20 departments where there more than few BILLIONS solutions !!!.

Coming the specific design solution with the AutoCAD menus draw to a factory plan view of the machines and departments orientation. In order to put them to correct sequence or to the right location some assumptions ,rules, methods must be kept.