# Aim of the Work

The aim of the present work is to study the defects in float glass in Egyptian Glass Company and find methods for their curing and prevention.

During the months from April 2002 to October 2002, some samples were collected and some experimental tests were carried out to achieve the aim of this study:

## 1-Microscopical analysis

The defects samples were examined in both plain and polarized light with a medium power microscope (from 10 to 150 magnifications). Properties of the defect itself were observed (72 samples were cut for this purpose, which were mainly inclusions (or stones), where as the other types of defects can be identified by naked eye as bubbles and most of the tin bath related defects).

## 2-Chemical analysis

The chemical analysis using x-ray fluorescence was done in two cases:

1- X-ray analysis of some chosen stones

6 samples from those identified under the microscope, representative to the types of stones which appear in high frequency, which helps in a useful qualitative information about these stones and emphasize theirs microscopical identity.

2- X-ray analysis of glass composition and its relation to ream

The glass composition during the period of study is recorded for different 8 samples and noting the change of composition due to ream change.

## 3-Spectrophotometric measurements

The absorption values were taken for 15 samples at 380 nm which is entirely due to $Fe^{3+}$, and noting:

a- The relation between absorption and thickness at constant Fe2O3 %

b- The relation between absorption and Fe2O3 % at constant thickness

## 4- Identifying distortion using zebra test

13 samples were tested for distortion. This test is a simple physical test from which, the severe distortion in float glass can be identified.