

Chapter 1

INTRODUCTION

1.1 General.

Lightweight concrete can be defined as a type of concrete which includes light weight aggregate that it decreases the density of the mixture while giving additional qualities such as nailbility and lessened the dead weight. It is lighter than the conventional concrete. The use of lightweight concrete has been widely spread across countries such as USA, United Kingdom and Sweden.

The main specialties of lightweight concrete are its low density and thermal conductivity. Its advantages are that there is a reduction of dead load, faster building rates in construction and lower haulage and handling costs.

The building of 'The Pantheon' of lightweight concrete material is still standing eminently in Rome until now for about 18 centuries as shown in Figure 1. It shows that the lighter materials can be used in concrete construction and has an economical advantage.

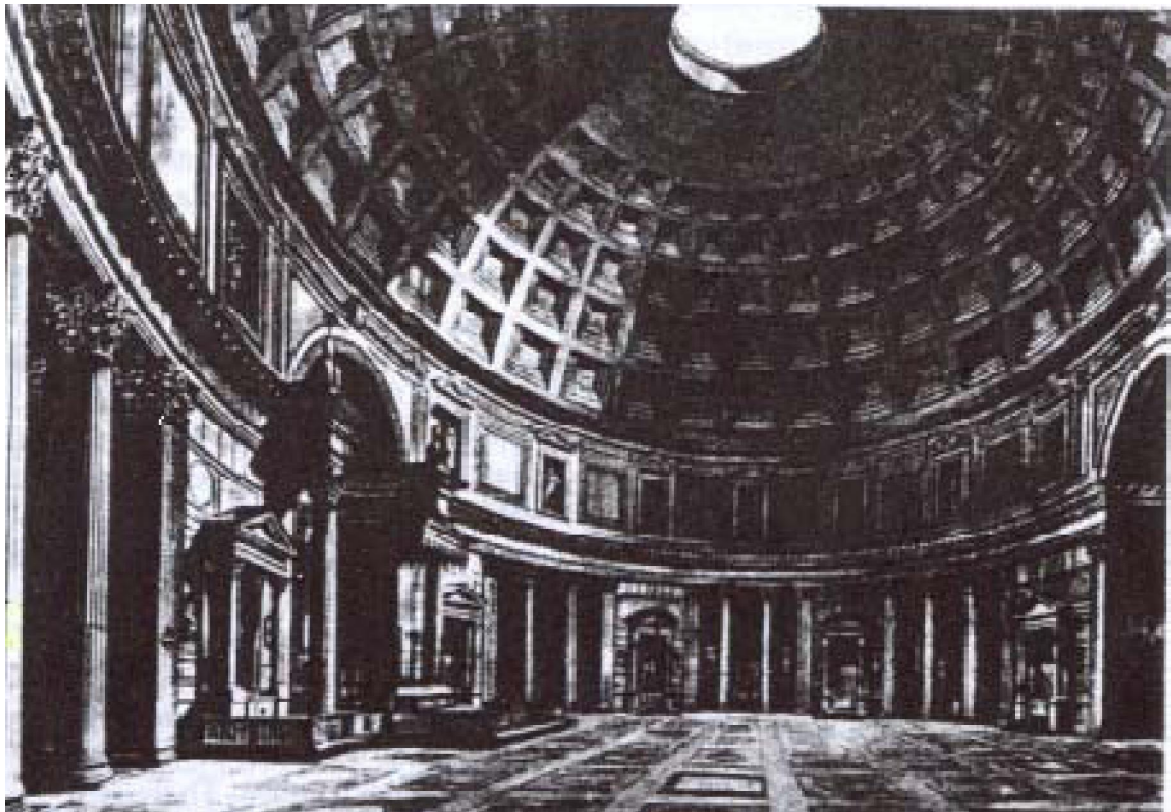


Fig:1.1 'The Pantheon'