



LOW CARBON EMISSION P.V.C MANUFACTURING PLANT DEVELOPMENT

ABSTRACT

This report gives the summarized description of the design of a PVC manufacturing plant. Polyvinylchloride (PVC) is one of the three most important polymers currently used worldwide along with polyethylene and polypropylene. This is because PVC is one of the cheapest polymers to make and has a large range of properties which can be used to make hundreds of products.

This material was brought about to substitute for metals, glass, wood, natural fibers, papers and fabrics. Importance of PVC material in current world is limitless. PVC products make life safer, more comfortable and more pleasurable. And, because PVC has an excellent ratio of economic cost to performance, it allows people of all income levels access to these important benefits. The diversity of PVC applications challenges the imagination. In everyday life, they are all around us, from construction profiles to medical devices, from roofing membranes to credit cards, from children's toys to pipes for water and gas. Few other materials are as versatile or able to fulfill such demanding specifications. In this way, PVC facilitates creativity and innovation, making new possibilities.

Towards the completion stage of the design project, we were able to get a comprehensive knowledge on how to design a PVC manufacturing plant under a specific set of design constraints.

The entire design procedure is clearly out lined in this report and all the other data required is contained in the annexure. **CHAPTER 01** describes the literature survey. Here it is included introduction of PVC material, uses and application of PVC, chemical structure and properties of PVC, global market and production of PVC.

CHAPTER 02 contains manufacturing processes of PVC. This chapter describes the processing methods, polymerization, raw materials and extraction, optimization and the flow sheet.

In **CHAPTER 03** we have described all the safety and environmental issues in the manufacturing plant. We selected the proper material handling methods according to the hazardous of the raw materials. Here we mentioned about the raw materials, reactivity of