

## I. INTRODUCTION

The present lecture will describe the general design method used to develop a large axial compressor which will be part of a large industrial gas turbine. It will be shown how during the design phase external factors such as changing marketing requirements can alter the initial design.

Reference will also be made to manufacturing and their production cost requirements.

All these factors can significantly alter the design method presented here from those which can be found in text books where production costs are often neglected.

It must also be noted that the number of machines of the same type and size produced is usually smaller than for other applications such as aircraft engines. Thus manufacturing processes can be significantly different leading to different constraints.

Once the design criteria have been outlined, it will be shown how these have been applied to the design of the compressor which fits the 100 megawatts W1101 gas turbine. A general description of the gas turbine and its observation will be given.